

10/578, 352

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NEWS 9	JUN 16 WPI First View (File WPIFV) will no longer be available after July 30, 2010		
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NEWS 16	JUN 29 Enhanced Batch Search Options in DGENE, USGENE, and PCTGEN		
NEWS 17	JUL 19 Enhancement of citation information in INPADOC databases provides new, more efficient competitor analyses		
NEWS 18	JUL 26 CAS coverage of global patent authorities has expanded to 61 with the addition of Costa Rica		
NEWS 19	SEP 15 MEDLINE Cited References provide additional relevant records with no additional searching.		
NEWS 20	OCT 04 Removal of Pre-IPC 8 data fields streamlines displays in USPATFULL, USPAT2, and USPATOLD.		
NEWS 21	OCT 04 Precision of EMBASE searching enhanced with new chemical name field		

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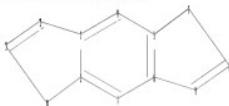
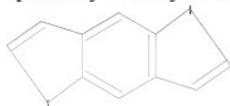
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ring nodes :
1 2 3 4 5 6 7 8 9 10 11 12
ring bonds :
1-2 1-6 2-3 2-10 3-4 3-12 4-5 5-6 5-7 6-9 7-8 8-9 10-11 11-12
exact/norm bonds :
2-10 3-12 5-7 6-9 7-8 8-9 10-11 11-12
normalized bonds :
1-2 1-6 2-3 3-4 4-5 5-6

Match level :
1:Atom 2:Atom 3:Atom 4:Atom 5:Atom 6:Atom 7:Atom 8:Atom 9:Atom 10:Atom
11:Atom 12:Atom

L1 STRUCTURE UPLOADED

=> D L1
L1 HAS NO ANSWERS
L1 STR



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=> S L1 FULL
FULL SEARCH INITIATED 08:54:16 FILE 'REGISTRY'
FULL SCREEN SEARCH COMPLETED - 4743 TO ITERATE

100.0% PROCESSED 4743 ITERATIONS 72 ANSWERS
SEARCH TIME: 00.00.01

L2 72 SEA SSS FUL L1

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FILE LAST UPDATED: 23 Nov 2010 (20101123/ED)
REVISED CLASS FIELDS (/NCL) LAST RELOADED: Aug 2010
USPTO MANUAL OF CLASSIFICATIONS THESAURUS ISSUE DATE: Aug 2010

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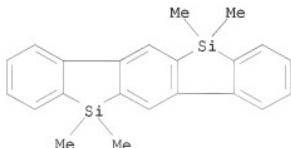
This file contains CAS Registry Numbers for easy and accurate substance identification.

=> S L2
L3 20 L2

=> D L3 IBIB ABS HITSTR 1-20

L3 ANSWER 1 OF 20 CAPLUS COPYRIGHT 2010 ACS on STN
ACCESSION NUMBER: 2010:1204027 CAPLUS
DOCUMENT NUMBER: 153:555241

TITLE: Rhodium-Catalyzed Synthesis of Silafluorene Derivatives via Cleavage of Silicon-Hydrogen and Carbon-Hydrogen Bonds
 AUTHOR(S): Ureshino, Tomonari; Yoshida, Takuya; Kuninobu, Yoichiro; Takai, Kazuhiko
 CORPORATE SOURCE: Division of Chemistry and Biochemistry, Graduate School of Natural Science and Technology, Okayama University, Tsushima, Kita-ku, Okayama, 700-8530, Japan
 SOURCE: Journal of the American Chemical Society (2010), 132(41), 14324-14326
 CODEN: JACSAT; ISSN: 0002-7863
 PUBLISHER: American Chemical Society
 DOCUMENT TYPE: Journal
 LANGUAGE: English
 AB The rhodium-catalyzed synthesis of silafluorenes from biphenylhydrosilanes is described. This highly efficient reaction proceeds via both Si-H and C-H bond activation, producing only H₂ as a side product. Using this method, a ladder-type bis-silicon-bridged p-terphenyl could also be synthesized.
 IT 959589-11-8P
 RL: SPN (Synthetic preparation); PREP (Preparation)
 (rhodium-catalyzed preparation of silafluorene derivs. via cleavage of silicon-hydrogen and carbon-hydrogen bonds)
 RN 959589-11-8 CAPLUS
 CN Benzo[1,2-b:4,5-b']bis[1]benzosilole, 5,11-dihydro-5,5,11,11-tetramethyl- (CA INDEX NAME)



REFERENCE COUNT: 40 THERE ARE 40 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT
 L3 ANSWER 2 OF 20 CAPLUS COPYRIGHT 2010 ACS on STN
 ACCESSION NUMBER: 2010:1118903 CAPLUS
 TITLE: Benzobis(silolothiophene)-Based Low Bandgap Polymers for Efficient Polymer Solar Cells
 AUTHOR(S): Wang, Jie-Yu; Hau, Steven K.; Yip, Hin-Lap; Davies, Joshua A.; Chen, Kung-Shih; Zhang, Yong; Sun, Ying; Jen, Alex K.-Y.
 CORPORATE SOURCE: Department of Materials Science and Engineering, University of Washington, Seattle, WA, 98195, USA
 SOURCE: Chemistry of Materials ACS ASAP
 CODEN: CMATEX; ISSN: 0897-4756
 PUBLISHER: American Chemical Society
 DOCUMENT TYPE: Journal
 LANGUAGE: English
 AB Two novel low-bandgap copolymers were synthesized that contain a

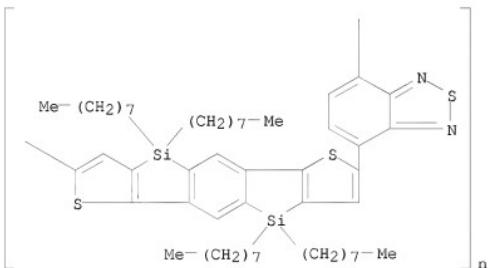
thiophene-phenylene-thiophene fused rings, in which the linked carbon atoms are replaced by a dialkylsilyl group (i.e., benzobis(silolo thiophene)-based polymers). The polymers were obtained by Stille coupling-type polymerization of the corresponding dialkylsilyl group-containing bis(trimethylstannanes) and the dibromothiadiazoles or the dibromobis(thienyl-substituted) thiadiazoles or the dibromobis(thienyl-substituted) thiadiazoles. The two polymers had low HOMO values and high hole mobilities (up to 0.01 cm.sup.2/V-s). Use of these polymers in bulk heterojunction solar cells showed a power conversion efficiency of .apprx.3.5%.

IT 1217503-13-3P 1248347-41-2P 1248347-42-3P
1248347-43-4P

RL: PRP (Properties); SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(solar cells containing; benzobis(silolo thiophene)-based low-band-gap polymers for polymer heterojunction solar cells)

RN 1217503-13-3 CAPLUS

CN Poly[2,1,3-benzothiadiazole-4,7-diyl(4,9-dihydro-4,4,9,9-tetraoctylbenzo[1'',2'':4,5;4'',5'':4',5']bissilolo[3,2-b:3',2'-b']dithiophene-2,7-diyl)] (CA INDEX NAME)



RN 1248347-41-2 CAPLUS

CN INDEX NAME NOT YET ASSIGNED

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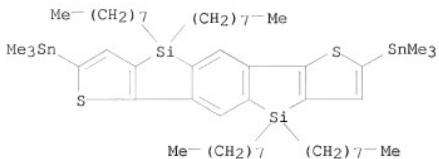
CRN 1248347-40-1

CMF C52 H90 S2 Si2 Sn2

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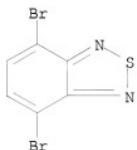
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CM 2

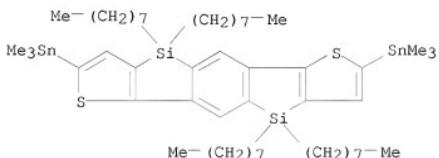
CRN 15155-41-6
CMF C6 H2 Br2 N2 S



RN 1248347-42-3 CAPLUS
CN INDEX NAME NOT YET ASSIGNED

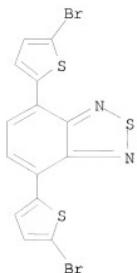
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CRN 1248347-40-1
CMF C52 H90 S2 Si2 Sn2

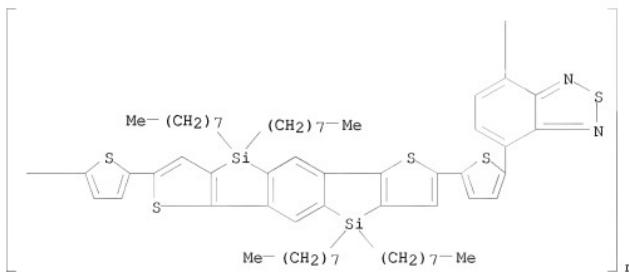


CM 2

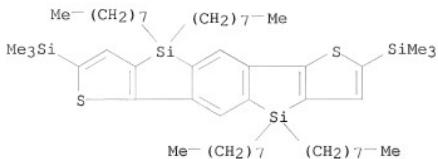
CRN 288071-87-4
CMF C14 H6 Br2 N2 S3



RN 1248347-43-4 CAPLUS
 CN INDEX NAME NOT YET ASSIGNED



IT 1217503-08-6P
 RL: PRP (Properties); RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
 (synthesis and desilylation of; in synthesis of
 benzobis(silolothiophene)-based low-band-gap polymers)
 RN 1217503-08-6 CAPLUS
 CN Benzo[1'',2'':4,5;4'',5'':4',5']bissilolo[3,2-b:3',2'-b']dithiophene,
 4,9-dihydro-4,4,9,9-tetraoctyl-2,7-bis(trimethylsilyl)- (CA INDEX NAME)

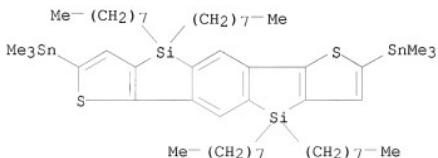


IT 1248347-40-1P

RL: PRP (Properties); RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
 (synthesis and polymerization of; in synthesis of
 benzobis(silolothiophene)-based low-band-gap polymers)

RN 1248347-40-1 CAPLUS

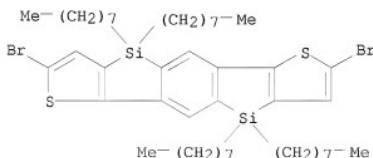
CN INDEX NAME NOT YET ASSIGNED



IT 1217503-09-7P

RL: PRP (Properties); RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
 (synthesis and trimethylstannylation of; in synthesis of
 benzobis(silolothiophene)-based low-band-gap polymers)

RN 1217503-09-7 CAPLUS

CN Benzo[1',2':4,5;4'',5'';4',5']bissilolo[3,2-b:3',2'-b']dithiophene,
 2,7-dibromo-4,9-dihydro-4,4,9,9-tetraoctyl- (CA INDEX NAME)

REFERENCE COUNT: 51 THERE ARE 51 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L3 ANSWER 3 OF 20 CAPLUS COPYRIGHT 2010 ACS on STN

ACCESSION NUMBER: 2010:381924 CAPLUS
 DOCUMENT NUMBER: 152:381994
 TITLE: Polymers derived from benzobis(silolothiophene) and their use as organic semiconductors
 INVENTOR(S): Tierney, Steven; Bailey, Clare; Mitchell, William; Blouin, Nicolas
 PATENT ASSIGNEE(S): Merck Patent GmbH, Germany
 SOURCE: PCT Int. Appl., 63pp.
 CODEN: PIXXD2
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2010031480	A1	20100325	WO 2009-EP6047	20090820
W: AB, AG, AL, AM, AO, AT, AU, AZ, BA, BB, BG, BH, BR, BW, BY, BZ, CA, CH, CL, CN, CO, CR, CU, CZ, DE, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LY, MA, MD, ME, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PE, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, ST, SV, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW				
RW: AI, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HR, RU, IE, IS, IT, LT, LV, MC, MK, MT, NL, NO, PL, PT, RO, SE, SI, SK, SM, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				

PRIORITY APPLN. INFO.: EP 2008-16527 A 20080919

OTHER SOURCE(S): CASREACT 152:381994

AB The invention relates to conjugated polymers comprising benzobis(silolothiophene) units or derivs. thereof, to methods of their preparation, to novel monomer units used therein, to the use of the polymers in organic electronic (OE) devices, and to OE devices comprising the polymers. Thus, 2,7-dibromo-5,5,10,10-tetraoctylbenzo[1'',2'':4,5;4'',5'':4',5']-bis(silolo[3,2-b:3',2'-b']thiophene) was prepared and copolynd. with 4,7-(2,1,3-benzothiadiazole) to give a conjugated polymers with Mw 8,600 g/mol, Mn 4,600 g/mol and λ_{max} 510 nm.

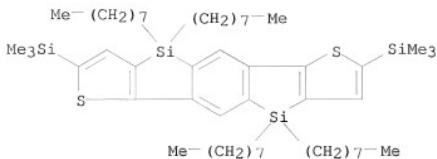
IT 1217503-08-6P 1217503-10-0P

RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)

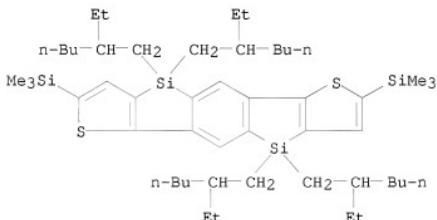
(intermediate; production of polymers derived from benzobis(silolothiophene) for use as organic semiconductors)

RN 1217503-08-6 CAPLUS

CN Benzo[1'',2'':4,5;4'',5'':4',5']bissilolo[3,2-b:3',2'-b']dithiophene, 4,9-dihydro-4,4,9,9-tetraoctyl-2,7-bis(trimethylsilyl)- (CA INDEX NAME)



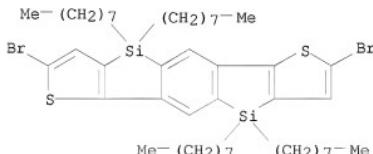
RN 1217503-10-0 CAPLUS

CN Benzo[1',2'':4,5;4'',5'']bissilolo[3,2-b:3',2'-b']dithiophene,
4,4,9,9-tetrakis(2-ethylhexyl)-4,9-dihydro-2,7-bis(trimethylsilyl)- (CA
INDEX NAME)

IT 1217503-09-7P 1217503-11-1P

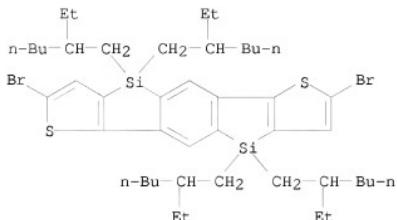
RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT
(Reactant or reagent)(monomer; production of polymers derived from benzobis(silolothiophene) for
use as organic semiconductors)

RN 1217503-09-7 CAPLUS

CN Benzo[1',2'':4,5;4'',5'']bissilolo[3,2-b:3',2'-b']dithiophene,
2,7-dibromo-4,9-dihydro-4,4,9,9-tetraoctyl- (CA INDEX NAME)

RN 1217503-11-1 CAPLUS

CN Benzo[1',2'':4,5;4'',5'']bissilolo[3,2-b:3',2'-b']dithiophene,
2,7-dibromo-4,4,9,9-tetrakis(2-ethylhexyl)-4,9-dihydro- (CA INDEX NAME)



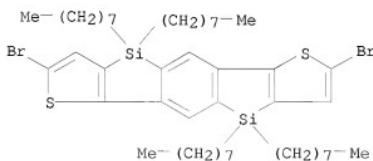
IT 1217503-12-2P, 4,7-(2,1,3-Benzothiadiazole)-2,7-dibromo-5,5,10,10-tetraoctylbenzo[1'',2'':4,5;4'',5'':4',5']-bis(silolo[3,2-b:3',2'-b]thiophene) copolymer 1217503-13-3P,
 4,7-(2,1,3-Benzothiadiazole)-2,7-dibromo-5,5,10,10-tetraoctylbenzo[1'',2'':4,5;4'',5'':4',5']-bis(silolo[3,2-b:3',2'-b]thiophene) copolymer, SRU 1217503-14-4P,
 4,7-(2,1,3-Benzothiadiazole)-2,7-dibromo-5,5,10,10-tetra(2-ethylhexyl)benzo[1'',2'':4,5;4'',5'':4',5']-bis(silolo[3,2-b:3',2'-b]thiophene) copolymer 1217503-15-5P,
 4,7-(2,1,3-Benzothiadiazole)-2,7-dibromo-5,5,10,10-tetra(2-ethylhexyl)benzo[1'',2'':4,5;4'',5'':4',5']-bis(silolo[3,2-b:3',2'-b]thiophene) copolymer, SRU
 RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
 (production of polymers derived from benzobis(silolothiophene) for use as organic semiconductors)

RN 1217503-12-2 CAPLUS

CN 2,1,3-Benzothiadiazole, 4,7-bis(4,4,5,5-tetramethyl-1,3,2-dioxaborolan-2-yl), polymer with 2,7-dibromo-4,9-dihydro-4,4,9,9-tetraoctylbenzo[1'',2'':4,5;4'',5'':4',5']bissilolo[3,2-b:3',2'-b]dithiophene (CA INDEX NAME)

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CRN 1217503-09-7
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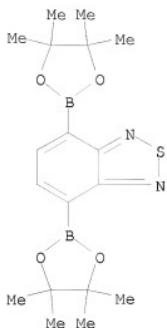
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10/578,352

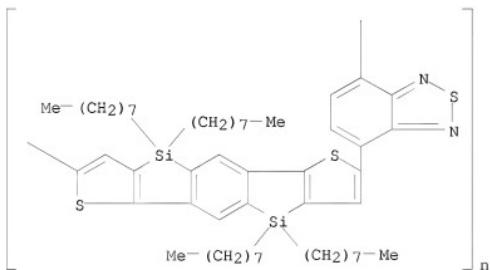
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STN: SEARCH

CRN 934365-16-9
CMF C18 H26 B2 N2 O4 S



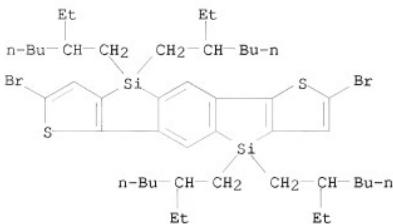
RN 1217503-13-3 CAPLUS
CN Poly[2,1,3-benzothiadiazole-4,7-diyl(4,9-dihydro-4,4,9,9-tetraoctylbenzo[1'',2'':4,5;4'',5'':4',5']bissilolo[3,2-b:3',2'-b']dithiophene-2,7-diyl)] (CA INDEX NAME)



RN 1217503-14-4 CAPLUS
CN 2,1,3-Benzothiadiazole, 4,7-bis(4,4,5,5-tetramethyl-1,3,2-dioxaborolan-2-yl)-, polymer with 2,7-dibromo-4,9,9-tetrakis(2-ethylhexyl)-4,9-dihydrobenzo[1'',2'':4,5;4'',5'':4',5']bissilolo[3,2-b:3',2'-b']dithiophene (CA INDEX NAME)

CM 1

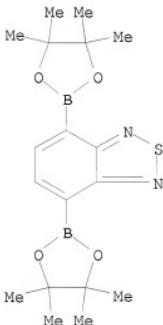
CRN 1217503-11-1
CMF C46 H72 Br2 S2 Si2



CM 2

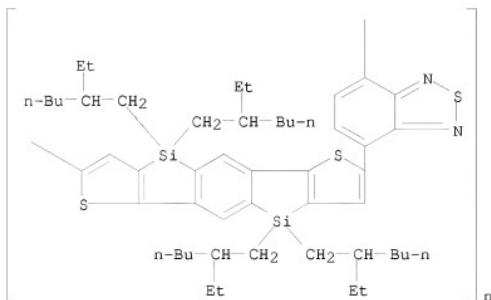
CRN 934365-16-9

CMF C18 H26 B2 N2 O4 S



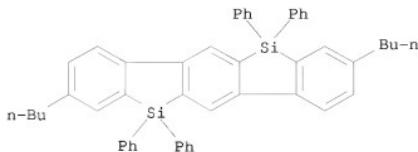
RN 1217503-15-5 CAPLUS

CN Poly[2,1,3-benzothiadiazole-4,7-diyl[4,4,9,9-tetrakis(2-ethylhexyl)-4,9-dihydrobenzo[1'',2'':4,5;4'':5',5'bissilolo[3,2-b:3',2'-b']dithiophene-2,7-diyl]]] (CA INDEX NAME)



OS.CITING REF COUNT: 1 THERE ARE 1 CAPLUS RECORDS THAT CITE THIS RECORD
(1 CITINGS)
REFERENCE COUNT: 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS
RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

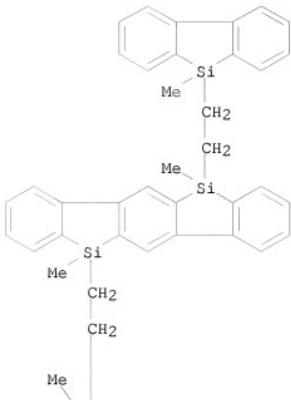
L3 ANSWER 4 OF 20 CAPLUS COPYRIGHT 2010 ACS on STN
ACCESSION NUMBER: 2009:1140587 CAPLUS
DOCUMENT NUMBER: 151:448483
TITLE: Development of a Sila-Friedel-Crafts Reaction and Its Application to the Synthesis of Dibenzosilole Derivatives
AUTHOR(S): Furukawa, Shunsuke; Kobayashi, Junji; Kawashima, Takayuki
CORPORATE SOURCE: Department of Chemistry, Graduate School of Science, The University of Tokyo, 7-3-1 Hongo, Bunkyo-ku, Tokyo, 113-0033, Japan
SOURCE: Journal of the American Chemical Society (2009), 131(40), 14192-14193
CODEN: JACSAV; ISSN: 0002-7863
PUBLISHER: American Chemical Society
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 151:448483
AB An intramol. sila-Friedel-Crafts reaction was developed and applied to the synthesis of dibenzosilole derivs. This reaction proceeds under mild conditions to afford the target in relatively high yield, indicating its availability as a versatile synthetic method. The synthesis of trisilasumanene, a silicon analog of sumanene, was achieved using the present reaction.
IT 1190956-35-4P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation and structure of dibenzosiloles and a trisilasumanene via intramol. sila-Friedel-Crafts reaction)
RN 1190956-35-4 CAPLUS
CN Benzo[1,2-b:4,5-b']bis[1]benzosilole,
3,9-dibutyl-5,11-dihydro-5,5,11,11-tetraphenyl- (CA INDEX NAME)



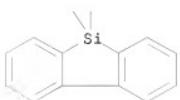
OS.CITING REF COUNT: 7 THERE ARE 7 CAPLUS RECORDS THAT CITE THIS RECORD
(7 CITINGS)
REFERENCE COUNT: 35 THERE ARE 35 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L3 ANSWER 5 OF 20 CAPLUS COPYRIGHT 2010 ACS on STN
ACCESSION NUMBER: 2009:926891 CAPLUS
DOCUMENT NUMBER: 151:381831
TITLE: New Types of Fluorescent Polymers with Bis-Silicon-Bridged p-Terphenyl as a Building Unit
AUTHOR(S): Li, Liangchun; Xu, Caishong; Li, Shuhong
CORPORATE SOURCE: Beijing National Laboratory for Molecular Sciences (BNLMS), Institute of Chemistry, Chinese Academy of Sciences, Beijing, 100190, Peop. Rep. China
SOURCE: Macromolecular Chemistry and Physics (2009), 210(13-14), 1097-1103
PUBLISHER: Wiley-VCH Verlag GmbH & Co. KGaA
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 151:381831
AB A series of novel polymers containing a bis-silicon-bridged p-terphenyl skeleton in the main chain is synthesized using hydrosilylation reactions with 6,12-dihydro-6,12-dimethyl-6,12-disilaindenol[1,2-b]fluorene (2) as the key monomer. Their photophys. and thermal properties are investigated and compared with those of the related monomer and model compds. All polymers show an improved thermal stability with respect to the small mols. In dilute solns., the polymers constructed with alternate bis-silicon-bridged p-terphenyl and saturated unit show constant emission maximum wavelengths and fluorescence quantum yields, comparable to those of monomer 2, while the polymer having an unsatd. linkage between the bis-silicon-bridged p-terphenyl units exhibits a low fluorescence quantum yield with a red-shifted emission maximum wavelength.
IT 1187642-96-1P 1187642-97-2P 1187642-98-3P
1187642-99-4P 1187643-00-0P 1187643-01-1P
1187643-02-2P 1187643-03-3P 1187643-04-4P
1187643-05-5P
RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)
(fluorescent polymers with bis-silicon-bridged terphenyl as building unit)
RN 1187642-96-1 CAPLUS
CN Benzo[1,2-b:4,5-b']bis[1]benzosilole,
5,11-dihydro-5,11-dimethyl-5,11-bis[2-(9-methyl-9H-9-silafluoren-9-yl)ethyl]- (CA INDEX NAME)

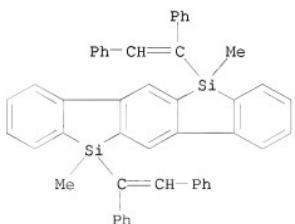
PAGE 1-A



PAGE 2-A



RN 1187642-97-2 CAPLUS

CN Benzo[1,2-b:4,5-b']bis[1]benzosilole,
5,11-bis(1,2-diphenylethenyl)-5,11-dihydro-5,11-dimethyl- (CA INDEX NAME)

10/578,352

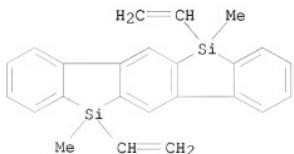
11/24/2010

STN: SEARCH

RN 1187642-98-3 CAPLUS
CN Benzo[1,2-b:4,5-b']bis[1]benzosilole,
5,11-diethenyl-5,11-dihydro-5,11-dimethyl-, polymer with
5,11-dihydro-5,11-dimethylbenzo[1,2-b:4,5-b']bis[1]benzosilole (CA INDEX
NAME)

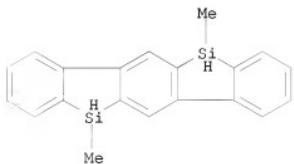
CM 1

CRN 959589-12-9
CMF C24 H22 Si2

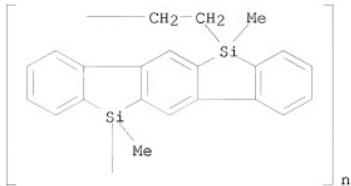


CM 2

CRN 959589-05-0
CMF C20 H18 Si2



RN 1187642-99-4 CAPLUS
CN Poly[(5,11-dimethylbenzo[1,2-b:4,5-b']bis[1]benzosilole-5,11-diyl)-1,2-
ethanediyl] (CA INDEX NAME)



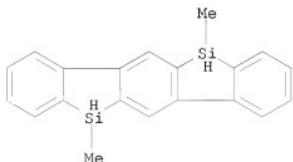
RN 1187643-00-0 CAPLUS

CN Benzo[1,2-b:4,5-b']bis[1]benzosilole, 5,11-dihydro-5,11-dimethyl-, polymer with 1,5-hexadiene (CA INDEX NAME)

CM 1

CRN 959589-05-0

CMF C20 H18 Si2



CM 2

CRN 592-42-7

CMF C6 H10

$$\text{H}_2\text{C}=\text{CH}-\text{CH}_2-\text{CH}_2-\text{CH}=\text{CH}_2$$

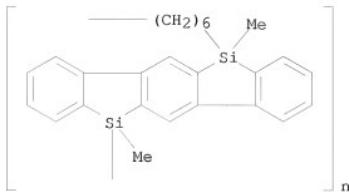
BN 1187643-01-1 CAPLUS

CN Poly[(5,11-dimethylbenzo[1,2-b:4,5-b']bis[1]benzosilole-5,11-diyl)-1,6-hexanediyyl] (CA INDEX NAME)

10/578,352

11/24/2010

STN: SEARCH



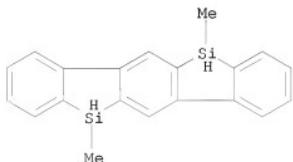
RN 1187643-02-2 CAPLUS

CN Benzo[1,2-b:4,5-b']bis[1]benzosilole, 5,11-dihydro-5,11-dimethyl-, polymer with 1,3-diethenyl-1,1,3,3-tetramethyldisiloxane (CA INDEX NAME)

CM 1

CRN 959589-05-0

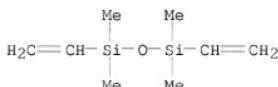
CMF C20 H18 Si2



CM 2

CRN 2627-95-4

CMF C8 H18 O Si2



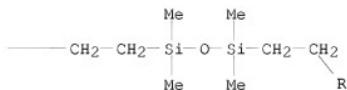
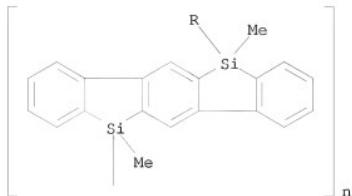
RN 1187643-03-3 CAPLUS

CN Poly[(5,11-dimethylbenzo[1,2-b:4,5-b']bis[1]benzosilole-5,11-diyl)-1,2-ethanediyl(1,1,3,3-tetramethyl-1,3-disiloxanediyl)-1,2-ethanediyl] (CA INDEX NAME)

10 / 578,352

11/24/2010

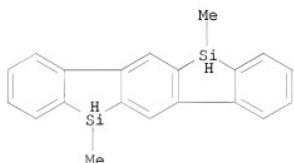
STN: SEARCH



RN 1187643-04-4 CAPLUS
CN Benzo[1,2-b;4,5-b']bis[1]benzosilole, 5,11-dihydro-5,11-dimethyl-, polymer with 1,4-bis(2-phenylethynyl)benzene (CA INDEX NAME)

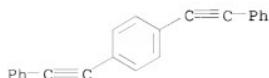
GM 1

CRN 959589-05-0
CMF C20 H18 Si2



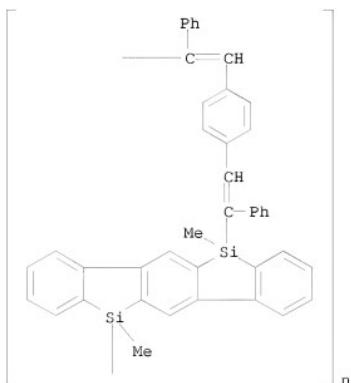
CM 2

CRN 1849-27-0
CMF C22 H14



BN 1187643-05-5 CAPIUS

CN Poly[(5,11-dimethylbenzo[1,2-b:4,5-b']bis[1]benzosilole-5,11-diyl)(1-phenyl-1,2-ethenediyl)-1,4-phenylene(2-phenyl-1,2-ethenediyl)] (CA INDEX NAME)

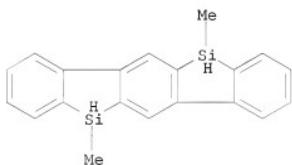


IT 959589-05-0 959589-12-9

RL: RCT (Reactant); RACT (Reactant or reagent)
(fluorescent polymers with bis-silicon-bridged terphenyl as building unit)

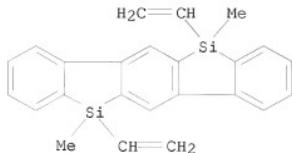
RN 959589-05-0 CAPLUS

CN Benzo[1,2-b:4,5-b']bis[1]benzosilole, 5,11-dihydro-5,11-dimethyl- (CA INDEX NAME)



RN 959589-12-9 CAPLUS

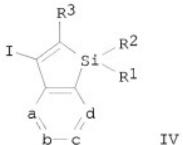
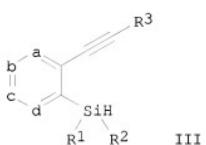
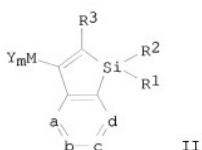
CN Benzo[1,2-b:4,5-b']bis[1]benzosilole,
5,11-diethenyl-5,11-dihydro-5,11-dimethyl- (CA INDEX NAME)



OS.CITING REF COUNT: 1 THERE ARE 1 CAPLUS RECORDS THAT CITE THIS RECORD
 (1 CITINGS)
 REFERENCE COUNT: 37 THERE ARE 37 CITED REFERENCES AVAILABLE FOR THIS
 RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L3 ANSWER 6 OF 20 CAPLUS COPYRIGHT 2010 ACS on STN
 ACCESSION NUMBER: 20091615370 CAPLUS
 DOCUMENT NUMBER: 150:551460
 TITLE: Aryl-substituted siloles, their preparation, and
 threshold-reduced organic electroluminescent devices
 therewith
 INVENTOR(S): Nakamura, Eiichi; Sato, Yoshiharu; Tsuji, Hayato;
 Ilies, Laurean
 PATENT ASSIGNEE(S): Japan Science and Technology Agency, Japan
 SOURCE: Jpn. Kokai Tokkyo Koho, 32pp.
 CODEN: JKXXAF
 DOCUMENT TYPE: Patent
 LANGUAGE: Japanese
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2009108053	A	20090521	JP 2008-264653	20081010
PRIORITY APPLN. INFO.:			JP 2007-265948	A 20071011
OTHER SOURCE(S):	MARPAT	150:551460		
GI				



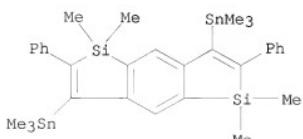
AB Silole compds. I [R₁, R₂ = C₁-6 aliphatic hydrocarbyl, alkoxy, aromatic hydrocarbyl, etc.; R₃ = C₁-6 aliphatic hydrocarbyl, aromatic hydrocarbyl, aromatic heterocycle; a-d = C, N; Ar = n-valent aromatic (heterocyclic) hydrocarbon; n = 1-6] are prepared by reacting II [Ar = YmM; R₁-R₃ = the same as above; Y = alkyl(amino), aryl; m = (m₀ - 1) (m₀ = valence number of M)] with ArX_n (Ar, n = the same as above; X = halo). The II is prepared by reacting acetylene derivative III (R₁-R₃, a-d = the same as above) with Group IVA anionic species. Further claimed is a process for preparing I by reacting IV (Ar = i; R₁-R₃, a-d = the same as above) with ArZn [Ar = the same as above; Z = ZnX, MgX, SnR₃, SiR₃ (X = halo; R = alkyl, alkylamino, aryl)]. Organic LED containing the silole compound I in organic layers (e.g., emitting layers) show fine stability of thin-film structure and long-term stability of superior high luminescent characteristics.

IT 1152130-94-3P

RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(high-efficiency organic LED containing aryl-substituted condensed silole compds. in electron-transporting layers)

RN 1152130-94-3 CAPLUS

CN 1,5-Disila-s-indacene, 1,1,5,5-tetramethyl-2,6-diphenyl-3,7-bis(trimethylstannyl)- (CA INDEX NAME)

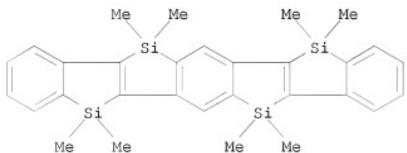


L3 ANSWER 7 OF 20 CAPLUS COPYRIGHT 2010 ACS on STN
 ACCESSION NUMBER: 2009:373667 CAPLUS
 DOCUMENT NUMBER: 151:20996
 TITLE: Substituent effects on the electronic structure of siloles
 AUTHOR(S): Zhan, Xiaowei; Barlow, Stephen; Marder, Seth R.
 CORPORATE SOURCE: Beijing National Laboratory for Molecular Sciences and CAS Key Laboratory of Organic Solids, Institute of Chemistry, Chinese Academy of Sciences, Beijing, 100190, Peop. Rep. China
 SOURCE: Chemical Communications (Cambridge, United Kingdom) (2009), (15), 1948-1955
 CODEN: CHCOFS; ISSN: 1359-7345
 PUBLISHER: Royal Society of Chemistry
 DOCUMENT TYPE: Journal; General Review
 LANGUAGE: English

AB A review. Siloles are attractive building blocks for the design and synthesis of organic semiconductors that exhibit potential applications in light-emitting diodes, solar cells, field-effect transistors, and sensors. Understanding how mol. engineering of the electronic structures can help control the properties of these materials has attracted significant research effort. In the present review the authors illustrate the current state-of-the-art of the mol. engineering of siloles, especially focusing on the effects of substituents and on the electronic structure of siloles.

IT 625389-91-5P
 RL: PRP (Properties); SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
 (substituent effects on the electronic structure of siloles for LED and field effect transistors and solar cells)

RN 625389-91-5 CAPLUS
 CN [1]Benzosilolo[3,2-b][1]benzosilolo[2',3':4,5]silolo[2,3-f][1]benzosilolo, 5,7,12,14-tetrahydro-5,5,7,7,12,12,14,14-octamethyl- (CA INDEX NAME)



OS.CITING REF COUNT: 17 THERE ARE 17 CAPLUS RECORDS THAT CITE THIS RECORD (17 CITINGS)
 REFERENCE COUNT: 79 THERE ARE 79 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L3 ANSWER 8 OF 20 CAPLUS COPYRIGHT 2010 ACS on STN
 ACCESSION NUMBER: 2008:707446 CAPLUS
 DOCUMENT NUMBER: 149:246581
 TITLE: Gold-catalyzed intramolecular trans-allylsilylation of alkynes forming 3-allyl-1-silaindenes
 AUTHOR(S): Matsuda, Takanori; Kadokawa, Sho; Yamaguchi,

10/578,352

11/24/2010

STN: SEARCH

CORPORATE SOURCE: Yoshiyuki; Murakami, Masahiro
 Department of Synthetic Chemistry and Biological
 Chemistry, Kyoto University, Katsura, Kyoto, 615-8510,
 Japan

SOURCE: Chemical Communications (Cambridge, United Kingdom)
 (2008), (24), 2744-2746

PUBLISHER: Royal Society of Chemistry

DOCUMENT TYPE: Journal

LANGUAGE: English

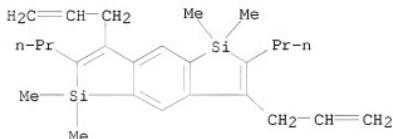
OTHER SOURCE(S): CASREACT 149:246581

AB 3-Allyl-1-silaindenes, e.g. 3-allyl-1,1-dimethyl-2-propyl-1-silaindene,
 are prepared from alkynes, e.g. 2-n-PrC.tpbond.CC6H4SiMe2CH2CH:CH2, having
 an allylsilane moiety by a gold-catalyzed intramol. trans-allylsilylation
 reaction.

IT 1045601-99-7P
 RL: SPN (Synthetic preparation); PREP (Preparation)
 (preparation of allylsilyl alkynes for gold-catalyzed intramol.
 trans-allylsilylation to give allylsilaindenes)

RN 1045601-99-7 CAPLUS

CN 1,5-Disila-s-indacene, 1,5-dihydro-1,1,5,5-tetramethyl-3,7-di-2-propen-1-
 yl-2,6-dipropyl- (CA INDEX NAME)



OS.CITING REF COUNT: 5 THERE ARE 5 CAPLUS RECORDS THAT CITE THIS RECORD
 (5 CITINGS)

REFERENCE COUNT: 30 THERE ARE 30 CITED REFERENCES AVAILABLE FOR THIS
 RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L3 ANSWER 9 OF 20 CAPLUS COPYRIGHT 2010 ACS on STN
 ACCESSION NUMBER: 20071300654 CAPLUS
 DOCUMENT NUMBER: 147:551330
 TITLE: Organic field emission element containing polycyclic
 condensed ring compound as dopant in light-emitting
 layer

INVENTOR(S): Yamaguchi, Shigehiro; Yamada, Hiroshi; Uchida, Manabu
 PATENT ASSIGNEE(S): Chisso Corp., Japan; Nagoya University
 SOURCE: Jpn. Kokai Tokkyo Koho, 63pp.
 CODEN: JKXXAF

DOCUMENT TYPE: Patent
 LANGUAGE: Japanese
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2007299980	A	20071115	JP 2006-127533	20060501

PRIORITY APPLN. INFO.: .

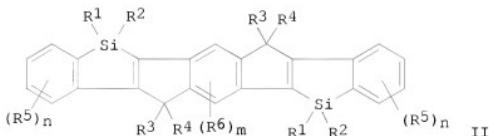
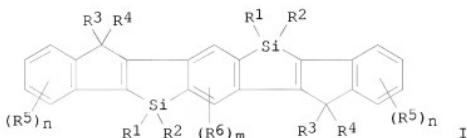
JP 2006-127533

20060501

OTHER SOURCE(S):

MARPAT 147:551330

GI



AB Disclosed is an organic field emission element comprising a light emitting layer between a pair of electrodes containing a host and a dopant, wherein the dopant is represented by I or II (R1-6 = H, alkyl, alkenyl, etc.; m = 0-2; and n = 0-4).

IT

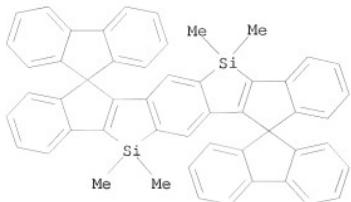
848155-66-8	956604-02-7	956604-04-9
956604-06-1	956604-08-3	956604-10-7
956604-12-9	956604-14-1	956604-16-3
956604-18-5	956604-20-9	956604-23-2
956604-25-4	956604-27-6	956604-29-8
956604-31-2		

RL: MOA (Modifier or additive use); USES (Uses)
(Organic field emission element containing polycyclic condensed ring compound as

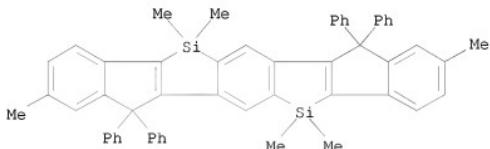
dopant in light-emitting layer)

RN 848155-66-8 CAPLUS

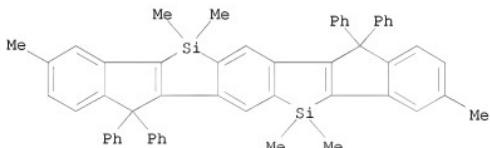
CN Dispiro[9H-fluorene-9,7' (14'H)-diindeno[2,1-d:2',1'-d']benzo[1,2-b:4,5-b']bissiilole-14',9''-[9H]fluorene], 5',12'-dihydro-5',5',12',12'-tetramethyl- (CA INDEX NAME)



RN 956604-02-7 CAPLUS

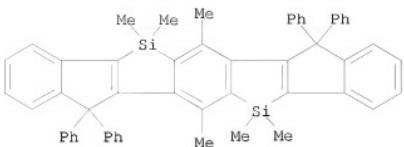
CN Diindeno[2,1-d:2',1'-d']benzo[1,2-b:4,5-b']bissilole,
5,7,12,14-tetrahydro-2,5,5,9,12,12-hexamethyl-7,7,14,14-tetraphenyl- (CA
INDEX NAME)

RN 956604-04-9 CAPLUS

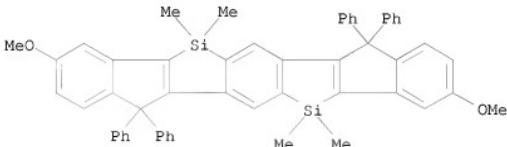
CN Diindeno[2,1-d:2',1'-d']benzo[1,2-b:4,5-b']bissilole,
5,7,12,14-tetrahydro-3,5,5,10,12,12-hexamethyl-7,7,14,14-tetraphenyl- (CA
INDEX NAME)

RN 956604-06-1 CAPLUS

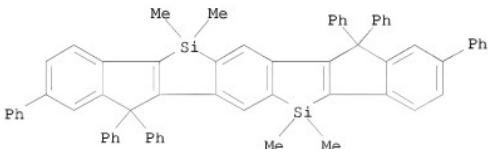
CN Diindeno[2,1-d:2',1'-d']benzo[1,2-b:4,5-b']bissilole,
5,7,12,14-tetrahydro-5,5,6,12,12,13-hexamethyl-7,7,14,14-tetraphenyl- (CA
INDEX NAME)



RN 956604-08-3 CAPLUS

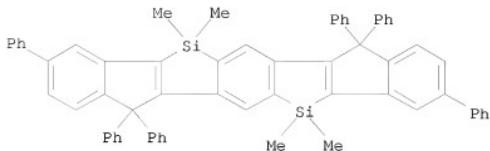
CN Diindeno[2,1-d:2',1'-d']benzo[1,2-b:4,5-b']bissilole,
5,7,12,14-tetrahydro-3,10-dimethoxy-5,12,12-tetramethyl-7,7,14,14-
tetraphenyl- (CA INDEX NAME)

RN 956604-10-7 CAPLUS

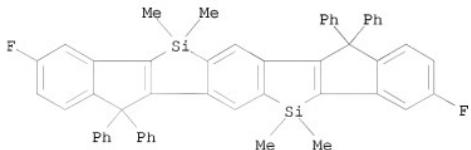
CN Diindeno[2,1-d:2',1'-d']benzo[1,2-b:4,5-b']bissilole,
5,7,12,14-tetrahydro-5,5,12,12-tetramethyl-2,7,7,9,14,14-hexaphenyl- (CA
INDEX NAME)

RN 956604-12-9 CAPLUS

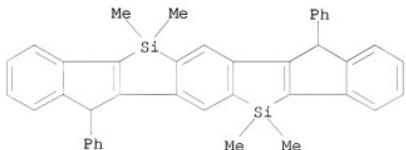
CN Diindeno[2,1-d:2',1'-d']benzo[1,2-b:4,5-b']bissilole,
5,7,12,14-tetrahydro-5,5,12,12-tetramethyl-3,7,7,10,14,14-hexaphenyl- (CA
INDEX NAME)



RN 956604-14-1 CAPLUS

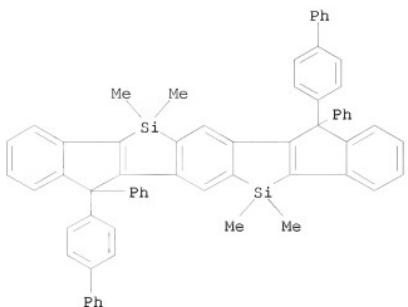
CN Diindeno[2,1-d:2',1'-d']benzo[1,2-b:4,5-b']bissilole,
3,10-difluoro-5,7,12,14-tetrahydro-5,5,12,12-tetramethyl-7,7,14,14-
tetraphenyl- (CA INDEX NAME)

RN 956604-16-3 CAPLUS

CN Diindeno[2,1-d:2',1'-d']benzo[1,2-b:4,5-b']bissilole,
5,7,12,14-tetrahydro-5,5,12,12-tetramethyl-7,14-diphenyl- (CA INDEX NAME)

RN 956604-18-5 CAPLUS

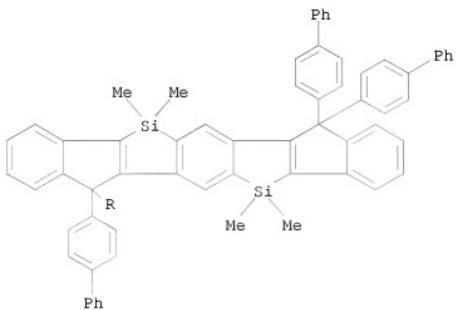
CN Diindeno[2,1-d:2',1'-d']benzo[1,2-b:4,5-b']bissilole,
7,14-bis([1,1'-biphenyl]-4-yl)-5,7,12,14-tetrahydro-5,5,12,12-tetramethyl-
7,14-diphenyl- (CA INDEX NAME)



RN 956604-20-9 CAPLUS

CN Diindenobisilole, 7,7,14,14-tetrakis([1,1'-biphenyl]-4-yl)-5,7,12,14-tetrahydro-5,5,12,12-tetramethyl- (CA INDEX NAME)

PAGE 1-A



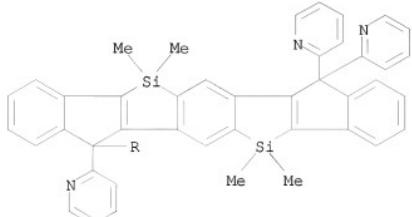
PAGE 2-A



RN 956604-23-2 CAPLUS

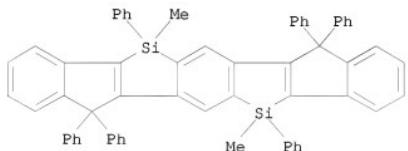
CN Diindenobisilole, 7,7,14,14-tetrakis([1,1'-biphenyl]-4-yl)-5,7,12,14-tetrahydro-5,5,12,12-tetramethyl-

5,7,12,14-tetrahydro-5,5,12,12-tetramethyl-7,7,14,14-tetra-2-pyridinyl-
(CA INDEX NAME)



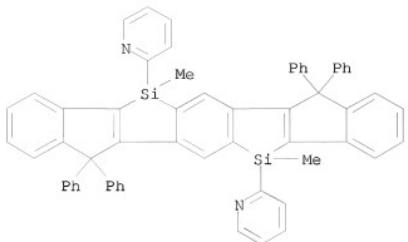
RN 956604-25-4 CAPLUS

CN Diindeno[2,1-d:2',1'-d']benzo[1,2-b:4,5-b']bissilole,
5,7,12,14-tetrahydro-5,12-dimethyl-5,7,12,14,14-hexaphenyl- (CA INDEX
NAME)

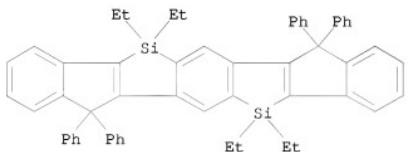


RN 956604-27-6 CAPLUS

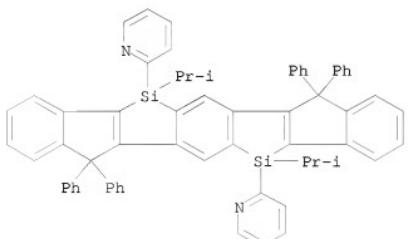
CN Diindeno[2,1-d:2',1'-d']benzo[1,2-b:4,5-b']bissilole,
5,7,12,14-tetrahydro-5,12-dimethyl-7,7,14,14-tetraphenyl-5,12-di-2-
pyridinyl- (CA INDEX NAME)



RN 956604-29-8 CAPLUS

CN Diindeno[2,1-d:2',1'-d']benzo[1,2-b:4,5-b']bissilole,
5,5,12,12-tetraethyl-5,7,12,14-tetrahydro-7,7,14,14-tetraphenyl- (CA INDEX NAME)

RN 956604-31-2 CAPLUS

CN Diindeno[2,1-d:2',1'-d']benzo[1,2-b:4,5-b']bissilole,
5,7,12,14-tetrahydro-5,12-bis(1-methylethyl)-7,7,14,14-tetraphenyl-5,12-di-
2-pyridinyl- (CA INDEX NAME)

IT 848155-65-7P

RL: IMF (Industrial manufacture); MOA (Modifier or additive use); PRP

10/578,352

11/24/2010

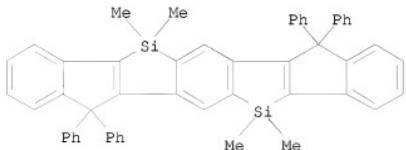
STN: SEARCH

(Properties); PREP (Preparation); USES (Uses)
 (preparation of polycyclic condensed ring compound as dopant for organic

field

emission element)

RN 848155-65-7 CAPLUS

CN Diindeno[2,1-d:2',1'-d']benzo[1,2-b:4,5-b']bissilole,
 5,7,12,14-tetrahydro-5,5,12,12-tetramethyl-7,7,14,14-tetraphenyl- (CA
 INDEX NAME)

IT 848155-64-6P

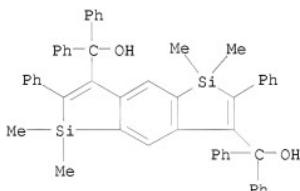
RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT
 (Reactant or reagent)

(preparation of polycyclic condensed ring compound as dopant for organic

field

emission element)

RN 848155-64-6 CAPLUS

CN 1,5-Disila-s-indacene-3,7-dimethanol,
 1,5-dihydro-1,1,5,5-tetramethyl-a,a,a',a',2,6-
 hexaphenyl- (CA INDEX NAME)

L3 ANSWER 10 OF 20 CAPLUS COPYRIGHT 2010 ACS on STN

ACCESSION NUMBER: 2007:1173754 CAPLUS

DOCUMENT NUMBER: 147:469455

TITLE: Preparation of benzometalloles by [2+2+2]

cycloaddition reaction of diynes with monoynes

INVENTOR(S): Murakami, Masahiro; Matsuda, Takanori; Kadokawa, Akira; Kureya, Takeshi

PATENT ASSIGNEE(S): Kyoto University, Japan; Nippon Shokubai Co., Ltd.

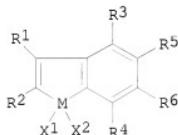
SOURCE: Jpn. Kokai Tokkyo Koho, 32pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2007269794	A	20071018	JP 2007-58672	20070308
PRIORITY APPLN. INFO.:			JP 2006-66496	A 20060310
OTHER SOURCE(S):	MARPAT	147:469455		
GI				



I

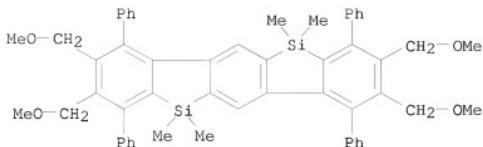
AB Benzometalloles I [R1, R2 = H, halo, alkyl, aryl, alkoxy, aryloxy, perfluoroalkyl, arylcarbonyloxy, amino, NO₂, NO, sulfanyl, phosphoryl, thiocyanato, silyl, stannylyl, heterocyclyl, etc.; which may be interrupted by alkylene, arylene, etc.; R1 and R2 may be bonded together to form monocyclic or condensed (un)substituted (hetero)ring; R3-R6 = any group given for R1 and R2; M1 = Si, Ge; X1, X2 = H, halo, alkyl, aryl, alkoxy, aryloxy, alkynyl, alkenyl, amino], useful as electron-transporting luminescent materials for organic electroluminescent devices, functional materials, e.g. for solar cells, fuel cells, transistors, sensors, etc., are prepared by reacting R3C.tplbond.CCR1:CR2MIX1X2C.tplbond.CR4 (R1-R4, M2, X1, X2 = same as above) with R5C.tplbond.CR6 (R5, R6 = same as above). Thus, a mixture of chloro(1,5-cyclooctadiene)iridium dimer, PPh₃, and Bu₂O was treated with 101.0 mg dimethyl(phenylethynyl)[2-(phenylethynyl)phenyl]silane (preparation given) and 68.5 mg 1,4-dimethoxy-2-butyne at 110° for 24 h to give 116.8 mg 2,3-di(methoxymethyl)-9,9-dimethyl-1,4-diphenyl-9-silafluorene.

IT 922501-40-4P 952676-71-0P
 RL: IMF (Industrial manufacture); SPN (Synthetic preparation); PREP (Preparation)

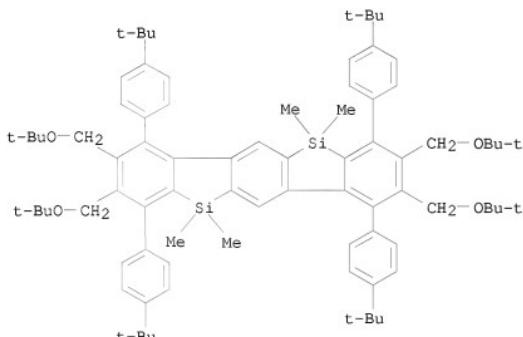
(preparation of benzometalloles for elec. and optical functional materials by [2+2+2] cycloaddn. reaction of diynes with monoynes)

RN 922501-40-4 CAPLUS

CN Benzo[1,2-b:4,5-b']bis[1]benzosilole,
 5,11-dihydro-2,3,8,9-tetrakis(methoxymethyl)-5,5,11,11-tetramethyl-1,4,7,10-tetraphenyl- (CA INDEX NAME)



RN 952676-71-0 CAPLUS

CN Benzo[1,2-b:4,5-b']bis[1]benzosilole,
2,3,8,9-tetrakis[(1,1-dimethylethoxy)methyl]-1,4,7,10-tetrakis[4-(1,1-dimethylethyl)phenyl]-5,11-dihydro-5,5,11,11-tetramethyl- (CA INDEX NAME)OS.CITING REF COUNT: 1 THERE ARE 1 CAPLUS RECORDS THAT CITE THIS RECORD
(1 CITINGS)

L3 ANSWER 11 OF 20 CAPLUS COPYRIGHT 2010 ACS on STN

ACCESSION NUMBER: 20071133084 CAPLUS

DOCUMENT NUMBER: 148:33802

TITLE: Synthesis of Novel Ladder Bis-Silicon-Bridged
p-Terphenyls

AUTHOR(S): Li, Liangchun; Xiang, Junfeng; Xu, Caihong

CORPORATE SOURCE: Beijing National Laboratory for Molecular Sciences
(BNLMS), Institute of Chemistry, Chinese Academy of Sciences, Beijing, 100080, Peop. Rep. ChinaSOURCE: Organic Letters (2007), 9(23), 4877-4879
CODEN: ORLEF7; ISSN: 1523-7060

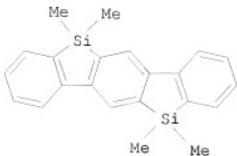
PUBLISHER: American Chemical Society

DOCUMENT TYPE: Journal

LANGUAGE: English

OTHER SOURCE(S): CASREACT 148:33802

GI



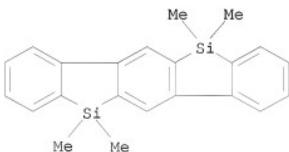
AB The tetrolithiation reaction of 2,2',5',2''-tetrabromo-p-terphenyl followed by a double silacyclization produces bis-silicon-bridged p-terphenyls, e.g. I. On the basis of this convenient method, a series of new ladder-type p-terphenyl derivs. have been synthesized. The crystal structure of I and photophys. properties are described.

IT 959589-11-8P

RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation) (crystal structure; preparation and photophys. properties of ladder bis-silicon-bridged p-terphenyls)

RN 959589-11-8 CAPLUS

CN Benzo[1,2-b:4,5-b']bis[1]benzosilole, 5,11-dihydro-5,5,11,11-tetramethyl- (CA INDEX NAME)

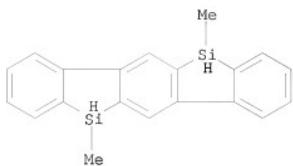


IT 959589-05-0P 959589-12-9P 959589-13-0P
959589-14-1P 959589-15-2P 959589-16-3P

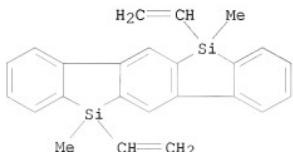
RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation) (preparation and photophys. properties of ladder bis-silicon-bridged p-terphenyls)

RN 959589-05-0 CAPLUS

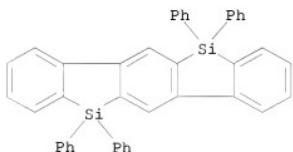
CN Benzo[1,2-b:4,5-b']bis[1]benzosilole, 5,11-dihydro-5,11-dimethyl- (CA INDEX NAME)



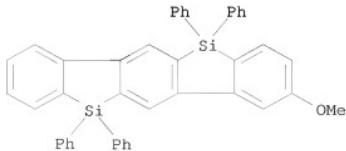
RN 959589-12-9 CAPLUS

CN Benzo[1,2-b:4,5-b']bis[1]benzosilole,
5,11-diethenyl-5,11-dihydro-5,11-dimethyl- (CA INDEX NAME)

RN 959589-13-0 CAPLUS

CN Benzo[1,2-b:4,5-b']bis[1]benzosilole, 5,11-dihydro-5,5,11,11-tetraphenyl-
(CA INDEX NAME)

RN 959589-14-1 CAPLUS

CN Benzo[1,2-b:4,5-b']bis[1]benzosilole,
5,11-dihydro-2-methoxy-5,5,11,11-tetraphenyl- (CA INDEX NAME)

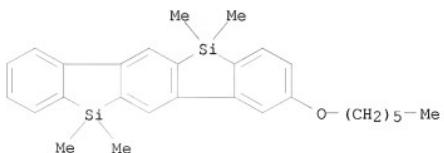
10/578,352

11/24/2010

STN: SEARCH

RN 959589-15-2 CAPLUS

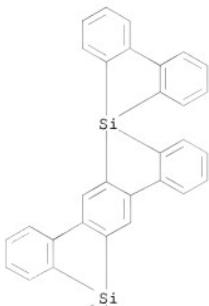
CN Benzo[1,2-b:4,5-b']bis[1]benzosilole,
2-(hexyloxy)-5,11-dihydro-5,5,11,11-tetramethyl- (CA INDEX NAME)



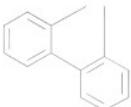
RN 959589-16-3 CAPLUS

CN Dispiro[9H-9-silafluorene-9,5'-(11'H)-benzo[1,2-b:4,5-b']bis[1]benzosilole-11',9''-[9H-9]silafluorene] (CA INDEX NAME)

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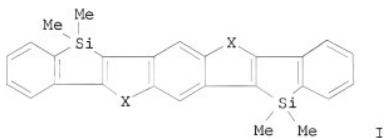


PAGE 2-A



OS.CITING REF COUNT: 19 THERE ARE 19 CAPLUS RECORDS THAT CITE THIS RECORD (20 CITINGS)
 REFERENCE COUNT: 44 THERE ARE 44 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L3 ANSWER 12 OF 20 CAPLUS COPYRIGHT 2010 ACS on STN
 ACCESSION NUMBER: 2006:1320920 CAPLUS
 DOCUMENT NUMBER: 146:206376
 TITLE: Ladder Distyrylbenzenes with Silicon and Chalcogen Bridges: Synthesis, Structures, and Properties
 AUTHOR(S): Mouri, Kazuhiro; Wakamiya, Atsushi; Yamada, Hiroshi; Kajiwara, Takashi; Yamaguchi, Shigehiro
 CORPORATE SOURCE: Department of Chemistry, Graduate School of Science, Nagoya University, Chikusa, Nagoya, 464-8602, Japan
 SOURCE: Organic Letters (2007), 9(1), 93-96
 PUBLISHER: American Chemical Society
 DOCUMENT TYPE: Journal
 LANGUAGE: English
 OTHER SOURCE(S): CODEN: ORLEF7; ISSN: 1523-7060
 CASREACT 146:206376
 GI

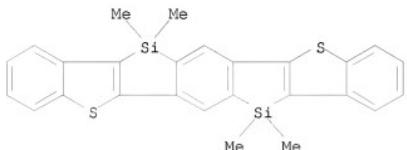


AB A cascade-type anionic double cyclization of (*o*-silylphenyl) (*o*-halophenyl) acetylenes via lithiation followed by treatment with elemental chalcogen produces Si and chalcogen-bridged stilbenes, e.g., I (X = S, SO₂, Se). Based on this reaction, Si and S- or Si and Se-bridged ladder distyrylbenzenes, e.g., I, were synthesized and characterized by x-ray crystallog. and electrochem. redox and photophys. spectroscopies. Their chemical modification by oxidation, crystal structures, and photophys. properties are described.
 IT 922736-71-8P 922736-72-9P
 RL: PEP (Physical, engineering or chemical process); PRP (Properties); RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); PROC (Process); RACT (Reactant or reagent)
 (crystal structure, photophys. and electrochem. redox; cascade-type

anionic double cyclization of (silylphenyl)(halophenyl)acetylenes via lithiation followed chalcogenation to give Si- and chalcogen-bridged stilbenes)

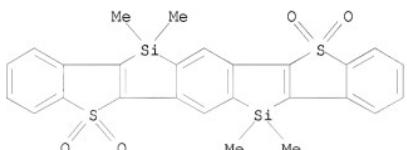
RN 922736-71-8 CAPLUS

CN Benzo[1',2':4,5;4'',5'':4',5']bissilolo[3,2-b:3',2'-b']bis[1]benzothiophene, 7,14-dihydro-7,7,14,14-tetramethyl- (CA INDEX NAME)



RN 922736-72-9 CAPLUS

CN Benzo[1',2':4,5;4'',5'':4',5']bissilolo[3,2-b:3',2'-b']bis[1]benzothiophene, 7,14-dihydro-7,7,14,14-tetramethyl-, 5,5,12,12-tetraoxide (CA INDEX NAME)



OS.CITING REF COUNT: 18 THERE ARE 18 CAPLUS RECORDS THAT CITE THIS RECORD (18 CITINGS)
 REFERENCE COUNT: 40 THERE ARE 40 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L3 ANSWER 13 OF 20 CAPLUS COPYRIGHT 2010 ACS on STN

ACCESSION NUMBER: 2006:1288489 CAPLUS

DOCUMENT NUMBER: 1461:206373

TITLE: Synthesis of Silafluorenes by Iridium-Catalyzed [2 + 2] Cycloaddition of Silicon-Bridged Diynes with Alkynes

AUTHOR(S): Matsuda, Takanori; Kadokawa, Sho; Goya, Tsuyoshi; Murakami, Masahiro

CORPORATE SOURCE: Department of Synthetic Chemistry and Biological Chemistry, Kyoto University, Katsura, Kyoto, 615-8510, Japan

SOURCE: Organic Letters (2007), 9(1), 133-136
 CODEN: ORLEF7; ISSN: 1523-7060

PUBLISHER: American Chemical Society
 DOCUMENT TYPE: Journal

LANGUAGE: English

OTHER SOURCE(S): CASREACT 146:206373

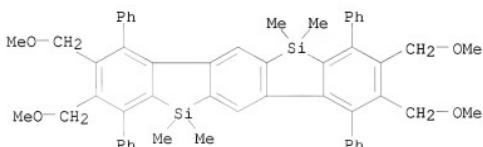
AB Twelve substituted silafluorene derivs. were prepared by [2+2+2] cycloaddn. of Si-bridged 1,6-diyynes with alkynes in the presence of an Ir(I)-phosphine catalyst in 7% to 93% yields. E.g., cyclotrimerization of dimethyl(phenylethynyl)(2-(phenylethynyl)phenyl)silane with 2 equiv 1,4-dimethoxybut-2-yne afforded 2,3-bis(methoxymethyl)-1,4-diphenylsilafluorene in 86% isolated yield. Extended silafluorene skeletons were constructed by [2+2+2] cycloaddn. of tetracynes with alkynes.

IT 922501-40-4P

RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of substituted silafluorenes by iridium-catalyzed [2+2+2] cycloaddn. of silicon-bridged diarynes with alkynes)

RN 922501-40-4 CAPLUS

CN Benzo[1,2-b:4,5-b']bis[1]benzosilole,
5,11-dihydro-2,3,8,9-tetrakis(methoxymethyl)-5,5,11,11-tetramethyl-
1,4,7,10-tetraphenyl- (CA INDEX NAME)



OS.CITING REF COUNT: 35 THERE ARE 35 CAPLUS RECORDS THAT CITE THIS RECORD (35 CITINGS)

REFERENCE COUNT: 39 THERE ARE 39 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L3 ANSWER 14 OF 20 CAPLUS COPYRIGHT 2010 ACS on STN

ACCESSION NUMBER: 2005:1250822 CAPLUS

DOCUMENT NUMBER: 145:124625

TITLE: The chemistry of silicon-containing ladder π -conjugated systems

AUTHOR(S): Yamaguchi, Shigehiro; Xu, Caihong

CORPORATE SOURCE: Department of Chemistry, Graduate School of Science, Nagoya University, and SORST, Japan

SOURCE: Yuki Gosei Kagaku Kyokaishi (2005), 63(11), 1115-1123 CODEN: YGKAE; ISSN: 0037-9980

PUBLISHER: Yuki Gosei Kagaku Kyokai

DOCUMENT TYPE: Journal; General Review

LANGUAGE: English

AB A review. The intramolecular reductive cyclization of bis(o-silylphenyl)acetylenes with Li naphthalenide produces bis-Si-bridged stilbenes. Based on this new cyclization, Si-bridged ladder π -conjugated systems consisting of the p-phenylenevinylene framework were synthesized, including the partially or fully Si-bridged bis(styryl)benzenes, extended ladder oligo(p-phenylenevinylene)s, and bis-Si-bridged stilbene-based π -conjugated polymers. All the ladder π -electron systems show intense fluorescence in the visible region. The detailed elucidation of their photophys. properties revealed the significant effect of the Si moieties on the fluorescence properties.

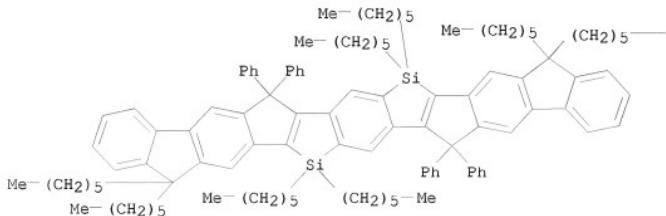
IT 848155-68-0 848155-70-4

RL: MSC (Miscellaneous)
 (chemical and fluorescence of silicon-containing ladder π -conjugated systems)

RN 848155-68-0 CAPLUS

CN Bisbenz[5,6]-s-indaceno[2,1-d:2',1'-d']benzo[1,2-b:4,5-b']bissilole,
 5,5,7,7,15,15,17,17-octahexyl-5,7,9,15,17,19-hexahydro-9,9,19,19-
 tetraphenyl- (9CI) (CA INDEX NAME)

PAGE 1-A



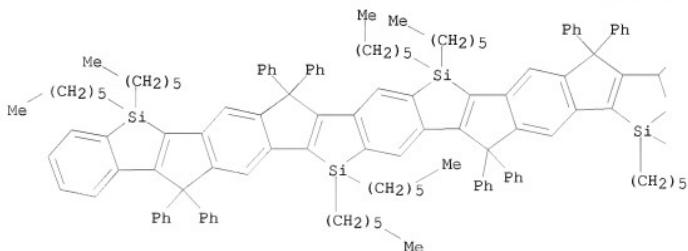
PAGE 1-B

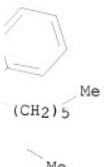
— Me

RN 848155-70-4 CAPLUS

CN Benzo[1'::::,2':::::4'',5'':;4'::::,5':::::4'',5'']bissilolo[2'':,3'':5,6,
 2'':,3'':5',6']di-s-indaceno[1,2-b;1',2'-b']bis[1]benzosilole,
 5,5,9,9,16,16,20,20-octahexyl-5,7,9,11,16,18,20,22-octahydro-
 7,7,11,11,18,18,22,22-octaphenyl- (CA INDEX NAME)

PAGE 1-A





OS.CITING REF COUNT: 12 THERE ARE 12 CAPLUS RECORDS THAT CITE THIS
 RECORD (12 CITINGS)
 REFERENCE COUNT: 82 THERE ARE 82 CITED REFERENCES AVAILABLE FOR THIS
 RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L3 ANSWER 15 OF 20 CAPLUS COPYRIGHT 2010 ACS on STN
 ACCESSION NUMBER: 2005:1178328 CAPLUS
 DOCUMENT NUMBER: 144:88342
 TITLE: Synthesis, structures, and photophysical properties of
 silicon and carbon-bridged ladder
 oligo(p-phenylenevinylene)s and related π -electron
 systems
 AUTHOR(S): Yamaguchi, Shigehiro; Xu, Caihong; Yamada, Hiroshi;
 Wakamiya, Atsushi
 CORPORATE SOURCE: Department of Chemistry, Graduate School of Science,
 Nagoya University, Furo, Chikusa, Nagoya, 464-8602,
 Japan
 SOURCE: Journal of Organometallic Chemistry (2005), 690(23),
 5365-5377
 CODEN: JORCAI; ISSN: 0022-328X
 PUBLISHER: Elsevier B.V.
 DOCUMENT TYPE: Journal
 LANGUAGE: English
 OTHER SOURCE(S): CASREACT 144:88342
 AB Partially or fully fused ladder oligo(p-phenylenevinylene)s (LOPVs) and
 related π -electron systems were synthesized. Thus, the intramolecular
 reductive cyclization of o-silyl-substituted bis(phenylethynyl)benzenes
 with Li naphthalenide produces partially Si-bridged bis(styryl)benzenes
 consisting of silaindene or disilaindacecne skeletons. By combining this
 cyclization with the Friedel-Crafts type electrophilic cyclization, a
 homologous series of the fully fused LOPVs and related compounds, bearing Si
 and C bridges, was synthesized in fairly good yields. The longest example
 of the LOPVs is the 13-ring-fused system that has a nearly flat
 π -conjugated framework with a length of 2.9 nm, as proven by x-ray
 crystallography. All the produced ladder π -electron systems show intense
 fluorescence in the visible region with high quantum yields as well as
 relatively small Stokes shifts. As the Si contents increase or the
 disilaindacecne skeleton is incorporated, the emission maxima shift to the
 longer wavelengths and the fluorescent quantum yields slightly decrease.
 These trends can be rationalized as due to the σ^* effect of Si,
 wherein the Si bridges contribute to the electronic structure through

$\sigma^*-\pi^*$ orbital interaction that cause the red shifts in the emission maxima and suppress the radiative decay process from the singlet excited state.

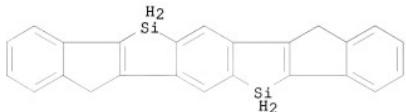
IT 872142-07-9

RL: PRP (Properties)

(DFT calcns. of LUMO; preparation, structure, and photophys. properties of silicon- and carbon-bridged ladder oligo(p-phenylenevinylene)s and related π -electron systems)

RN 872142-07-9 CAPLUS

CN Diindeno[2,1-d:2',1'-d']benzo[1,2-b:4,5-b']bissirole,
5,7,12,14-tetrahydro- (9CI) (CA INDEX NAME)



IT 848155-68-0P

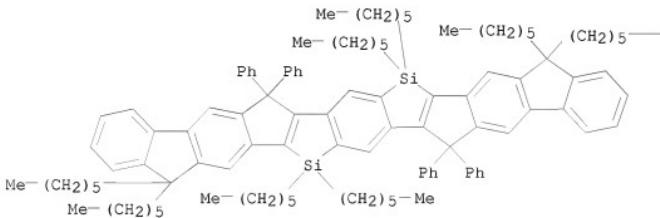
RL: PEP (Physical, engineering or chemical process); PRP (Properties); PYP (Physical process); SPN (Synthetic preparation); PREP (Preparation); PROC (Process)

(crystal structure, radiative and non-radiative decay rate consts. for; preparation, structure, and photophys. properties of silicon- and carbon-bridged ladder oligo(p-phenylenevinylene)s and related π -electron systems)

RN 848155-68-0 CAPLUS

CN Bisbenz[5,6]-s-indaceno[2,1-d:2',1'-d']benzo[1,2-b:4,5-b']bissirole,
5,5,7,7,15,15,17,17-octahexyl-5,7,9,15,17,19-hexahydro-9,19,19-
tetraphenyl- (9CI) (CA INDEX NAME)

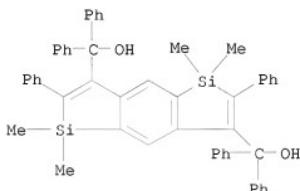
PAGE 1-A



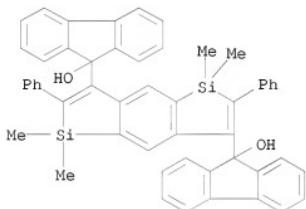
PAGE 1-B

— Me

IT 848155-64-6P 848155-71-5P 848155-76-0P
 872142-08-0P
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT
 (Reactant or reagent)
 (preparation, structure, and photophys. properties of silicon- and
 carbon-bridged ladder oligo(p-phenylenevinylene)s and related
 π -electron systems)
 RN 848155-64-6 CAPLUS
 CN 1,5-Disila-s-indacene-3,7-dimethanol,
 1,5-dihydro-1,1,5,5-tetramethyl- $\alpha,\alpha',\alpha',\alpha'$,2,6-
 hexaphenyl- (CA INDEX NAME)

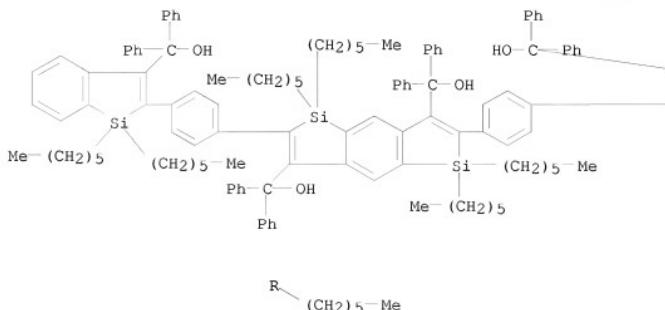


RN 848155-71-5 CAPLUS
 CN 9H-Fluoren-9-ol, 9,9'-(1,5-dihydro-1,1,5,5-tetramethyl-2,6-diphenyl-1,5-
 disila-s-indacene-3,7-diyli)bis- (9CI) (CA INDEX NAME)

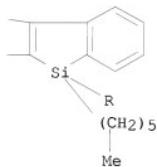


RN 848155-76-0 CAPLUS
 CN 1,5-Disila-s-indacene-3,7-dimethanol,
 2,6-bis[4-[1,1-dihexyl-3-(hydroxydiphenylmethyl)-1H-1-silainden-2-
 yl]phenyl]-1,1,5,5-tetrahexyl-1,5-dihydro-
 $\alpha,\alpha',\alpha',\alpha'$ -tetraphenyl- (9CI) (CA INDEX NAME)

PAGE 1-A

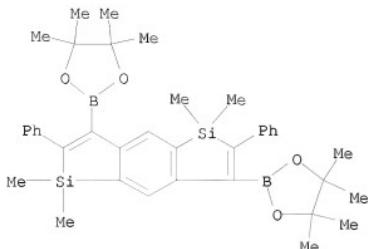


PAGE 1-B

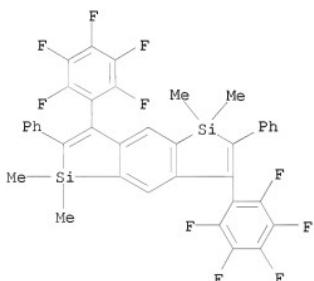


RN 872142-08-0 CAPLUS

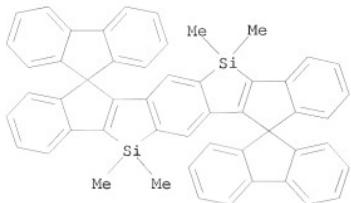
CN 1,5-Disila-s-indacene, 1,5-dihydro-1,1,5,5-tetramethyl-2,6-diphenyl-3,7-bis(4,4,5,5-tetramethyl-1,3,2-dioxaborolan-2-yl)- (9CI) (CA INDEX NAME)



IT 794512-60-0P 848155-66-8 872142-09-1P
 RL: SPN (Synthetic preparation); PREP (Preparation)
 (preparation, structure, and photophys. properties of silicon- and
 carbon-bridged ladder oligo(p-phenylenevinylene)s and related
 π-electron systems)
 RN 794512-60-0 CAPLUS
 CN 1,5-Disila-s-indacene, 1,5-dihydro-1,1,5,5-tetramethyl-3,7-
 bis(pentafluorophenyl)-2,6-diphenyl- (9CI) (CA INDEX NAME)

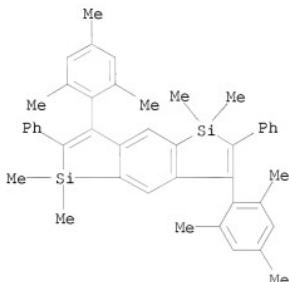


RN 848155-66-8 CAPLUS
 CN Dispiro[9H-fluorene-9,7'-(14'H)-diindeno[2,1-d:2',1'-d']benzo[1,2-b:4,5-
 b']bissilole-14',9''-[9H]fluorene],
 5',12'-dihydro-5',5',12',12'-tetramethyl- (CA INDEX NAME)



RN 872142-09-1 CAPLUS

CN 1,5-Disila-s-indacene, 1,5-dihydro-1,1,5,5-tetramethyl-2,6-diphenyl-3,7-bis(2,4,6-trimethylphenyl)- (9CI) (CA INDEX NAME)

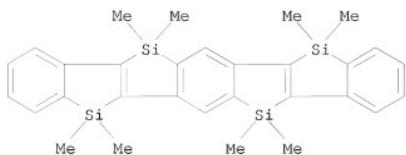


IT 625389-91-5

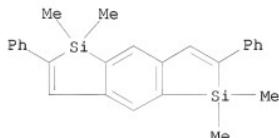
RL: PEP (Physical, engineering or chemical process); PRP (Properties); PYP (Physical process); PROC (Process)
 (radiative and non-radiative decay rate consts. for; preparation, structure, and photophys. properties of silicon- and carbon-bridged ladder oligo(p-phenylenevinylene)s and related π -electron systems)

RN 625389-91-5 CAPLUS

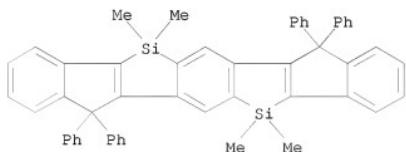
CN [1]Benzosilolo[3,2-b][1]benzosilolo[2',3':4,5]silolo[2,3-f][1]benzosilole, 5,7,12,14-tetrahydro-5,5,7,7,12,12,14,14-octamethyl- (CA INDEX NAME)



IT 794512-52-0P 848155-65-7P 848155-70-4P
 RL: PEP (Physical, engineering or chemical process); PRP (Properties); PYP (Physical process); SPN (Synthetic preparation); PREP (Preparation); PROC (Process)
 (radiative and non-radiative decay rate consts. for; preparation, structure, and photophys. properties of silicon- and carbon-bridged ladder oligo(p-phenylenevinylene)s and related π -electron systems)
 RN 794512-52-0 CAPLUS
 CN 1,5-Disila-s-indacene, 1,5-dihydro-1,1,5,5-tetramethyl-2,6-diphenyl- (9CI)
 (CA INDEX NAME)

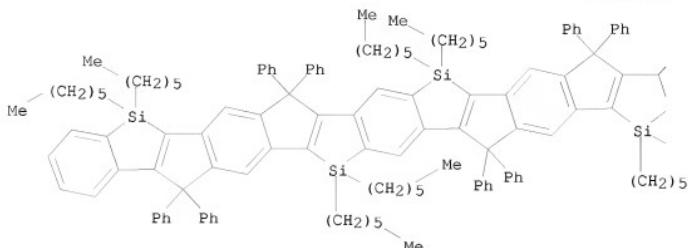


RN 848155-65-7 CAPLUS
 CN Diindeno[2,1-d:2',1'-d']benzo[1,2-b:4,5-b']bissilole,
 5,7,12,14-tetrahydro-5,5,12,12-tetramethyl-7,7,14,14-tetraphenyl- (CA INDEX NAME)

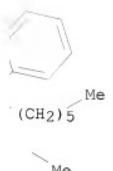


RN 848155-70-4 CAPLUS
 CN Benzo[1'',1'',2'',2'':4'',5'',4'',5'',5'',5'']bissilolo[2'',3'':5,6;
 2'',3'':5',6']di-s-indaceno[1,2-b:1',2'-b']bis[1]benzosilole,
 5,5,9,9,16,16,20,20-octahexyl-5,7,9,11,16,18,20,22-octahydro-
 7,7,11,11,18,18,22,22-octaphenyl- (CA INDEX NAME)

PAGE 1-A



PAGE 1-B



OS.CITING REF COUNT: 27 THERE ARE 27 CAPLUS RECORDS THAT CITE THIS RECORD (27 CITINGS)
 REFERENCE COUNT: 44 THERE ARE 44 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L3 ANSWER 16 OF 20 CAPLUS COPYRIGHT 2010 ACS on STN
 ACCESSION NUMBER: 2005:429419 CAPLUS
 DOCUMENT NUMBER: 142:482144
 TITLE: Preparation of silicon-containing polycyclic fused ring type π-conjugated organic materials, intermediate therefor, process for producing polycyclic fused ring type π-conjugated organic materials, and process for producing intermediate for polycyclic fused ring type π-conjugated organic materials
 INVENTOR(S): Yamaguchi, Shigehiro; Xu, Caihong
 PATENT ASSIGNEE(S): Japan Science and Technology Agency, Japan
 SOURCE: PCT Int. Appl., 61 pp.
 CODEN: PIXXD2
 DOCUMENT TYPE: Patent
 LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2005044826	A1	20050519	WO 2004-JP16433	20041105
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
JP 2005154410	A	20050616	JP 2004-224771	20040730
JP 4552023	B2	20100929		
CA 2544427	A1	20050519	CA 2004-2544427	20041105
EP 1700860	A1	20060913	EP 2004-818199	20041105
R: DE, FR, GB, NL				
CN 1875024	A	20061206	CN 2004-80031650	20041105
CN 100457761	C	20090204		
CN 101456876	A	20090617	CN 2008-10184528	20041105
KR 2006111560	A	20061027	KR 2006-7011173	20060607
KR 757636	B1	20070910		
US 20090143605	A1	20090604	US 2008-578352	20081229
PRIORITY APPLN. INFO.:			JP 2003-378923	A 20031107
			JP 2004-224771	A 20040730
			CN 2004-80031650	A3 20041105
			WO 2004-JP16433	W 20041105

ASSIGNMENT HISTORY FOR US PATENT AVAILABLE IN LSUS DISPLAY FORMAT

OTHER SOURCE(S): MARPAT 142:482144

GI

* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

AB Silicon-containing polycyclic fused ring type π -conjugated organic materials (I) [$\text{Ar}1 = \text{each (un)substituted arylene, oligoarylene or divalent heterocyclic or oligoheterocyclic group; R1, R2 = H, alkyl, alkoxy, alkylthio, aryl, aryloxy, arylthio, arylalkyl, aryloxy, arylalkylthio, arylalkenyl, arylalkynyl, arylalkynyl, allyl, arylsulfonyloxy, alkylsulfonfonyloxy, heterocyclyl, halo, each (un)substituted NH2, silyl, or siloxy; R3 = H, alkyl, alkylthio, aryl, arylthio, arylalkyl, arylalkylthio, arylalkenyl, arylalkynyl, allyl, hydroxylalkyl, halomagnesium, halozinc, boric acid or its ester, boryl, heterocyclyl, halo, each (un)substituted hydroxymethyl, silyl, or stanny; R4 = H, alkyl, alkoxy, alkylthio, aryl, aryloxy, arylthio, arylalkyl, arylalkoxy, arylalkylthio, arylalkenyl, arylalkynyl, allyl, allylsulfonyloxy, alkylsulfonyloxy, heterocyclyl, halo, substituted boryl, each (un)substituted NH2, silyl, or siloxy; l = 0,1; n = 0-4] are prepared. These compds., e.g. 1,4-bis(1,1-dimethyl-1H-1-silainden-2-yl)benzene derivs. (II) [E = H, Me, SiMe2H, 4,4,5,5-tetramethyl-1,3,2-dioxaborolan-2-yl (BPin)] are obtained by$

subjecting the starting material (III) to dimetalation with an organometallic base and trapping the resultant organometallic compound with an organosilicon reagent [(i) (1) n-BuLi or t-BuLi; (2) HMe₂SiCl] to obtain the intermediate (IV), subsequently reacting the intermediate with a metallic reducing agent to cause an intramol. reductive cyclization reaction to proceed to thereby yield a dianion intermediate, and then trapping the dianion intermediate with an electrophilic agent [(ii) (1) lithium naphthalenide (LiNaph) in THF at room temperature for 5 min; (2) electrophile or NH₄Cl]. The polycyclic fused ring type π -conjugated organic materials are excellent as luminescent properties and charge-transporting properties and useful as luminescent materials and charge-transporting materials with high luminescent efficiency and high charge-transporting efficiency, e.g. for electroluminescent devices (no data).

IT 848155-75-9P

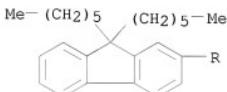
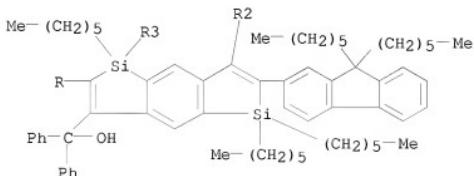
RL: PRPH (Prophetic); RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation of π -conjugated silicon-containing polycyclic fused ring compds.

via intramol. reductive cyclization of
1,4-bis(2-silylphenylethynyl)benzene or
1,4-bis(phenylethynyl)-2,5-bis(silyl)benzene derivs.)

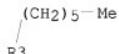
RN 848155-75-9 CAPLUS

CN 1,5-Disila-s-indacene-3,7-dimethanol,
2,6-bis(9,9-dihexyl-9H-fluoren-2-yl)-1,1,5,5-tetrahexyl-1,5-dihydro-
 $\alpha,\alpha,\alpha',\alpha'$ -tetraphenyl- (9CI) (CA INDEX NAME)

PAGE 1-A



PAGE 2-A



IT 848155-64-6P 848155-71-5P 848155-76-0P

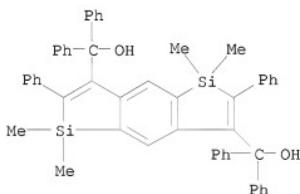
852066-30-9P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation of π -conjugated silicon-containing polycyclic fused ring compds.

via intramol. reductive cyclization of
1,4-bis(2-silylphenylethynyl)benzene or
1,4-bis(phenylethynyl)-2,5-bis(silyl)benzene derivs.)

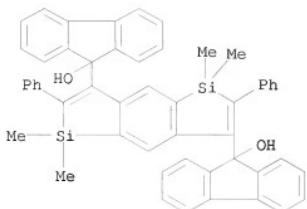
RN 848155-64-6 CAPLUS

CN 1,5-Disila-s-indacene-3,7-dimethanol,
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hexaphenyl- (CA INDEX NAME)



RN 848155-71-5 CAPLUS

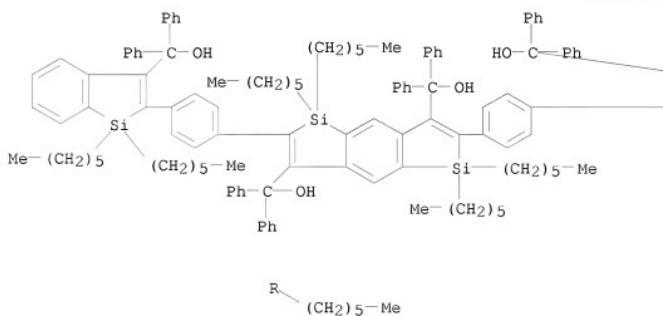
CN 9H-Fluoren-9-ol, 9,9'-(1,5-dihydro-1,1,5,5-tetramethyl-2,6-diphenyl-1,5-disila-s-indacene-3,7-diyl)bis- (9CI) (CA INDEX NAME)

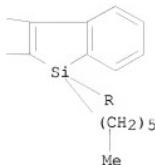


RN 848155-76-0 CAPLUS

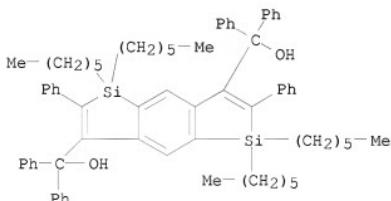
CN 1,5-Disila-s-indacene-3,7-dimethanol,
 2,6-bis[4-[1,1-dihexyl-3-(hydroxydiphenylmethyl)-1H-1-silainden-2-yl]phenyl]-1,1,5,5-tetrahexyl-1,5-dihydro-a,a,a',a'-tetraphenyl- (9CI) (CA INDEX NAME)

PAGE 1-A

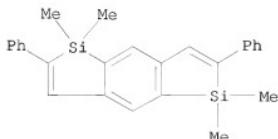




RN 852066-30-9 CAPLUS
 CN 1,5-Disila-s-indacene-3,7-dimethanol,
 1,1,5,5-tetrahexyl-1,5-dihydro-a,a,a',a',2,6-
 hexaphenyl- (9CI) (CA INDEX NAME)



IT 794512-52-0P 848155-65-7P 848155-66-8P
 848155-68-0P 848155-70-4P 852066-31-0P
 RL: SPN (Synthetic preparation); PREP (Preparation)
 (preparation of π-conjugated silicon-containing polycyclic fused ring
 compds.
 via intramol. reductive cyclization of
 1,4-bis(2-silylphenylethynyl)benzene or
 1,4-bis(phenylethynyl)-2,5-bis(silyl)benzene derivs.)
 RN 794512-52-0 CAPLUS
 CN 1,5-Disila-s-indacene, 1,5-dihydro-1,1,5,5-tetramethyl-2,6-diphenyl- (9CI)
 (CA INDEX NAME)



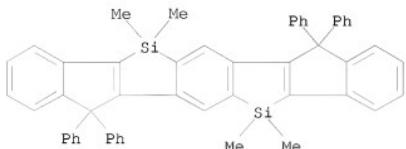
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11/24/2010

STN: SEARCH

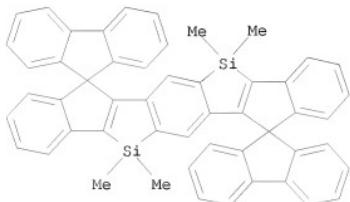
RN 848155-65-7 CAPLUS

CN Diindeno[2,1-d:2',1'-d']benzo[1,2-b:4,5-b']bissirole,
5,7,12,14-tetrahydro-5,5,12,12-tetramethyl-7,7,14,14-tetraphenyl- (CA
INDEX NAME)



RN 848155-66-8 CAPLUS

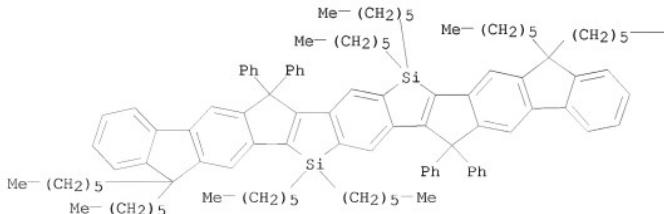
CN Dispiro[9H-fluorene-9,7'(14'H)-diindeno[2,1-d:2',1'-d']benzo[1,2-b:4,5-b']bissirole-14',9''-[9H]fluorene],
5',12'-dihydro-5',5',12',12'-tetramethyl- (CA INDEX NAME)



RN 848155-68-0 CAPLUS

CN Bisbenz[5,6]-s-indaceno[2,1-d:2',1'-d']benzo[1,2-b:4,5-b']bissirole,
5,5,7,7,15,15,17,17-octahexyl-5,7,9,15,17,19-hexahydro-9,9,19,19-
tetraphenyl- (9CI) (CA INDEX NAME)

PAGE 1-A



10/578,352

11/24/2010

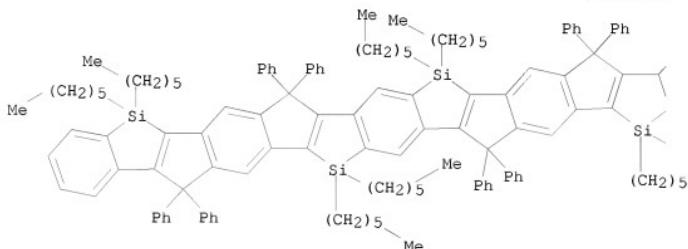
STN: SEARCH

PAGE 1-B

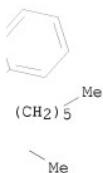
— Me

RN 848155-70-4 CAPLUS
CN Benzo[1'::::,2':::4'',5'';4':::,5':::;4':::,5':::]bissilolo[2'':,3'':5,6;
2':::,3':::;5',6'ldi-s-indaceno[1,2-b:1',2'-b']bis[1]benzosilole,
5,5,9,9,16,16,20,20-octahexyl-5,7,9,11,16,18,20,22-octahydro-
7,7,11,11,18,18,22,22-octaphenyl- (CA INDEX NAME)

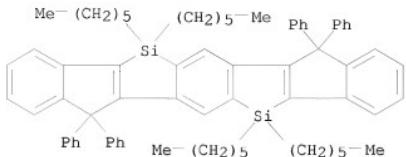
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PAGE 1-B

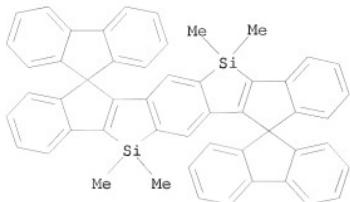


RN 852066-31-0 CAPLUS
CN Diindeno[2,1-d:2',1'-d']benzo[1,2-b:4,5-b']bissilole,
5,5,12,12-tetrahexyl-5,7,12,14-tetrahydro-7,7,14,14-tetraphenyl- (9CI)
(CA INDEX NAME)



OS.CITING REF COUNT: 1 THERE ARE 1 CAPLUS RECORDS THAT CITE THIS RECORD
 (3 CITINGS)
 REFERENCE COUNT: 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

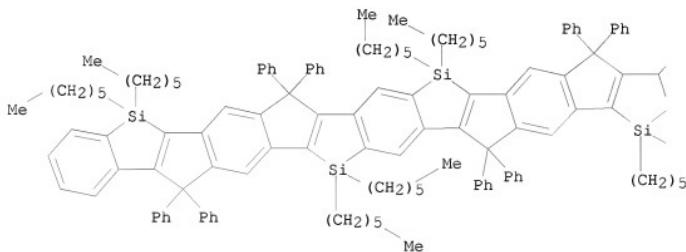
L3 ANSWER 17 OF 20 CAPLUS COPYRIGHT 2010 ACS on STN
 ACCESSION NUMBER: 2005:64272 CAPLUS
 DOCUMENT NUMBER: 142:316892
 TITLE: Ladder oligo(p-phenylenevinylene)s with silicon and carbon bridges
 AUTHOR(S): Xu, Caihong; Wakamiya, Atsushi; Yamaguchi, Shigehiro
 CORPORATE SOURCE: Department of Chemistry, Graduate School of Science, Nagoya University, Nagoya, 464-8602, Japan
 SOURCE: Journal of the American Chemical Society (2005), 127(6), 1638-1639
 CODEN: JACSAT; ISSN: 0002-7863
 PUBLISHER: American Chemical Society
 DOCUMENT TYPE: Journal
 LANGUAGE: English
 OTHER SOURCE(S): CASREACT 142:316892
 AB A general and versatile synthetic method for ladder oligo(p-phenylenevinylene)s (LOPVs) and related π -electron systems, having annelated π -conjugated structures with Si and C bridges, was developed from the combination of two cyclization reactions, i.e. The intramol. reductive cyclization of (*o*-silylphenyl)acetylene derivs. and the Friedel-Crafts-type cyclization. This methodol. allows the authors to synthesize a homologous series of the ladder mols. up to a 13-ring-fused system. The crystal structural anal. of the longest 13-ring-fused LOPV proves its nearly flat π -conjugated framework with a length of .apprx.2.9 nm. All the produced ladder π -electron systems show intense fluorescence in the visible region with high quantum yields as well as relatively small Stokes shifts.
 IT 848155-66-8P 848155-70-4P
 RL: PRP (Properties); SPM (Synthetic preparation); PREP (Preparation)
 (crystal structure; preparation and Friedel-Crafts-type cyclization of bis[(hydroxymethyl)benzosilolyl]benzene in presence of boron trifluoride to give ladder oligo(p-phenylenevinylene)s with silicon and carbon bridges)
 RN 848155-66-8 CAPLUS
 CN Dispiro[9H-fluorene-9,7'-(14'H)-diindeno[2,1-d:2',1'-d']benzo[1,2-b:4,5-b']bissilole-14',9''-[9H]fluorene], 5',12'-dihydro-5',5',12',12'-tetramethyl- (CA INDEX NAME)



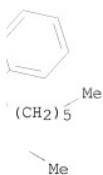
RN 848155-70-4 CAPLUS

CN Benzo[1'',1'',2'',2'',4'',5'',4'',5'':4'',5'']bissilolo[2'',3'':5,6;
2'',3'':5',6']di-s-indaceno[1,2-b:1',2'-b']bis[1]benzosilole,
5,5,9,9,16,16,20,20-octahexyl-5,7,9,11,16,18,20,22-octahydro-
7,7,11,11,18,18,22,22-octaphenyl- (CA INDEX NAME)

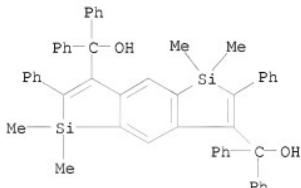
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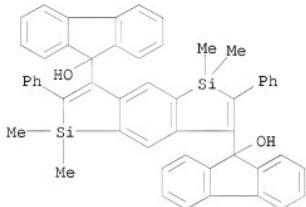
PAGE 1-B



IT 848155-64-6P 848155-71-5P 848155-75-9P
 848155-76-0P
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
 (preparation and Friedel-Crafts-type cyclization of bis(hydroxymethyl)benzosilolyl)benzene in presence of boron trifluoride to give ladder oligo(p-phenylenevinylene)s with silicon and carbon bridges)
 RN 848155-64-6 CAPLUS
 CN 1,5-Disila-s-indacene-3,7-dimethanol,
 1,5-dihydro-1,1,5,5-tetramethyl-a,a,a',a',2,6-
 hexaphenyl- (CA INDEX NAME)

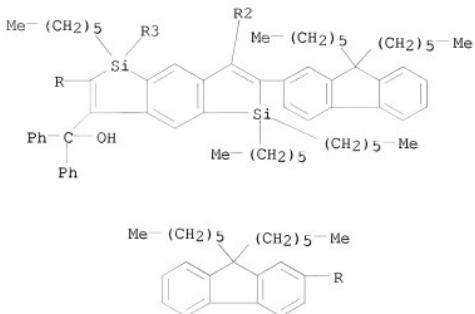


RN 848155-71-5 CAPLUS
 CN 9H-Fluoren-9-ol, 9,9'-(1,5-dihydro-1,1,5,5-tetramethyl-2,6-diphenyl-1,5-
 disila-s-indacene-3,7-diyl)bis- (9CI) (CA INDEX NAME)

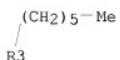


RN 848155-75-9 CAPLUS
 CN 1,5-Disila-s-indacene-3,7-dimethanol,
 2,6-bis(9,9-dihexyl-9H-fluoren-2-yl)-1,1,5,5-tetrahexyl-1,5-dihydro-
 a,a,a',a'-tetraphenyl- (9CI) (CA INDEX NAME)

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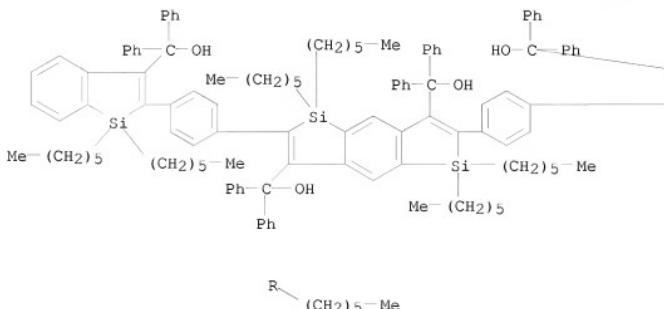


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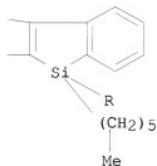


RN 848155-76-0 CAPLUS
 CN 1,5-Disila-s-indacene-3,7-dimethanol,
 2,6-bis[4-{1,1-dihexyl-3-(hydroxydiphenylmethyl)-1H-1-silainden-2-
 yl}phenyl]-1,1,5,5-tetrahexyl-1,5-dihydro-
 $\alpha,\alpha,\alpha',\alpha'$ -tetraphenyl- (9CI) (CA INDEX NAME)

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PAGE 1-B

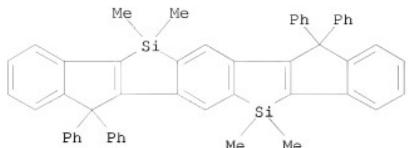


IT 848155-65-7P 848155-68-0P

RL: SPN (Synthetic preparation); PREP (Preparation)
 (preparation and Friedel-Crafts-type cyclization of
 bis(hydroxymethyl)benzosilolyl)benzene in presence of boron
 trifluoride to give ladder oligo(p-phenylenevinylene)s with silicon and
 carbon bridges)

RN 848155-65-7 CAPLUS

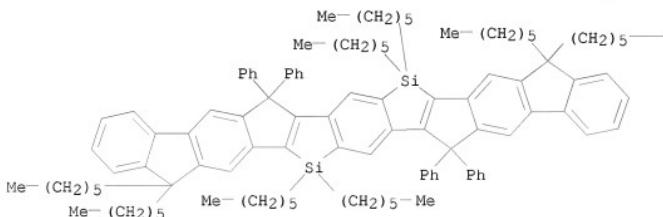
CN Diindeno[2,1-d:2',1'-d']benzo[1,2-b:4,5-b']bissilole,
 5,7,12,14-tetrahydro-5,5,12,12-tetramethyl-7,7,14,14-tetraphenyl- (CA
 INDEX NAME)



RN 848155-68-0 CAPLUS

CN Bisbenz[5,6]-s-indaceno[2,1-d:2',1'-d']benzo[1,2-b:4,5-b']bissilole,
5,5',7,7',15,15,17,17-octahexyl-5,7,9,15,17,19-hexahydro-9,9,19,19-
tetraphenyl- (9CI) (CA INDEX NAME)

PAGE 1-A



PAGE 1-B

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OS.CITING REF COUNT: 45 THERE ARE 45 CAPLUS RECORDS THAT CITE THIS
RECORD (45 CITINGS)REFERENCE COUNT: 24 THERE ARE 24 CITED REFERENCES AVAILABLE FOR THIS
RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L3 ANSWER 18 OF 20 CAPLUS COPYRIGHT 2010 ACS on STN

ACCESSION NUMBER: 2004:773153 CAPLUS

DOCUMENT NUMBER: 141:424228

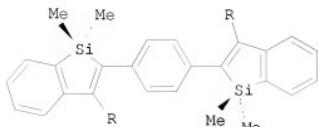
TITLE: General Silaindene Synthesis Based on Intramolecular
Reductive Cyclization toward New Fluorescent
Silicon-Containing π -Electron MaterialsAUTHOR(S): Xu, Caihong; Wakamiya, Atsushi; Yamaguchi, Shigehiro
CORPORATE SOURCE: Department of Chemistry, Graduate School of Science,Nagoya University, Nagoya, 464-8602, USA
SOURCE: Organic Letters (2004), 6(21), 3707-3710PUBLISHER: American Chemical Society
DOCUMENT TYPE: Journal

LANGUAGE:

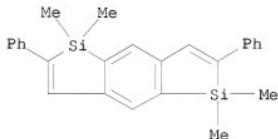
English

OTHER SOURCE(S):
GI

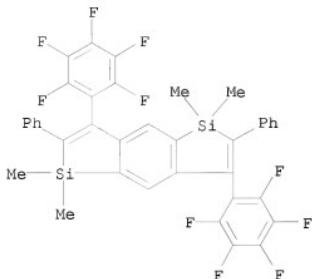
CASREACT 141:424228



- AB The reaction of (*o*-silylphenyl)acetylene derivs., e.g.
 4-(2-Me2SiHC6H4C.tpbond.C)2C6H4 with lithium naphthalenide undergoes
 intramol. reductive cyclization to produce various silaindene derivs., I
 (R = H, Me, SiMe2H, Bpin, Br, CGF5), after quenching with electrophiles.
 On the basis of this methodol., a series of silaindene-containing
 π -electron systems are synthesized that show intense blue to
 greenish-blue fluorescence. The crystal structure of I (R = H) was determined
 IT 794512-52-0P
 RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)
 (crystal structure; preparation of fluorescent silicon-containing
 π -electron
 materials via intramol. reductive cyclization of
 (silylphenyl)acetylenes)
 RN 794512-52-0 CAPLUS
 CN 1,5-Disila-*s*-indacene, 1,5-dihydro-1,1,5,5-tetramethyl-2,6-diphenyl- (9CI)
 (CA INDEX NAME)



- IT 794512-60-0P
 RL: SPN (Synthetic preparation); PREP (Preparation)
 (preparation of fluorescent silicon-containing π -electron materials via
 intramol. reductive cyclization of (silylphenyl)acetylenes)
 RN 794512-60-0 CAPLUS
 CN 1,5-Disila-*s*-indacene, 1,5-dihydro-1,1,5,5-tetramethyl-3,7-
 bis(pentafluorophenyl)-2,6-diphenyl- (9CI) (CA INDEX NAME)



OS.CITING REF COUNT: 26 THERE ARE 26 CAPLUS RECORDS THAT CITE THIS RECORD (26 CITINGS)
 REFERENCE COUNT: 34 THERE ARE 34 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L3 ANSWER 19 OF 20 CAPLUS COPYRIGHT 2010 ACS on STN
 ACCESSION NUMBER: 2004:182894 CAPLUS
 DOCUMENT NUMBER: 140:217807
 TITLE: π -conjugated organic material of polycyclic fused ring type, intermediate therefor, and process for producing π -conjugated organic material of polycyclic fused ring type
 INVENTOR(S): Yamaguchi, Shigehiro; Xu, Caihong; Tamao, Kohei
 PATENT ASSIGNEE(S): Japan Science and Technology Corporation, Japan
 SOURCE: PCT Int. Appl., 48 pp.
 CODEN: PIXXD2
 DOCUMENT TYPE: Patent
 LANGUAGE: Japanese
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2004018488	A1	20040304	WO 2003-JP10538	20030820
W: CN, JP, KR, US				
RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR				
EP 1548019	A1	20050629	EP 2003-792753	20030820
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, FI, RO, CY, TR, BG, CZ, EE, HU, SK				
JP 4408416	B2	20100203	JP 2004-530587	20030820
US 20060100433	A1	20060511	US 2006-525221	20060118
US 7705174	B2	20100427		
PRIORITY APPLN. INFO.:			JP 2002-244315	A 20020823
			WO 2003-JP10538	W 20030820

ASSIGNMENT HISTORY FOR US PATENT AVAILABLE IN LSUS DISPLAY FORMAT

AB The present invention relates to (i) a π -conjugated organic material of the polycyclic fused ring type which is obtained by reacting a linear

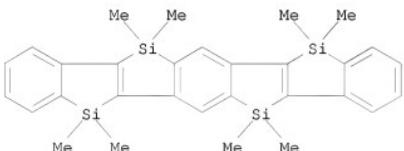
hydrocarbon comprising a triple bond and a hydrocarbon which is a benzene ring having an organosilicon as a substituent (an arylacetylene compound or phenylacetylene compound) with a metallic reducing agent to cause an intramolecular reductive cyclization reaction to proceed between the silicon and a carbon having the triple bond and (ii) a process for producing the π -conjugated organic material of the polycyclic fused ring type. The π -conjugated organic material of the polycyclic fused ring type is applicable to luminescent materials, e.g., an organic electroluminescent (EL) element, and charge-transporting materials. Thus, 5.50 g bis[(2-bromo-5-methoxyphenyl)acetylene] and 29.8 mmol butyllithium hexane solution was mixed, 5.0 g N,N-dimethylaminodimethylchlorosilane was added therein and reacted, and 3.7 mL Et alc. was added there to give 5.85 g bis(2-ethoxydimethylsilyl-5-methoxyphenyl)acetylene, 0.92 g of which was treated with 0.06 g lithium to give 0.53 g 2,7-dimethoxy-5,10,10-tetramethyl-5,10-disila-5,10-dihydroindeno[2,1-a]indene, 10.20 g of which was treated with sec-butyllithium, 0.67 g 1,2-diidoethane was added therein to give 47.2 mg 2,7-diido-3,8-dimethoxy-5,10,10-tetramethyl-5,10-disila-5,10-dihydroindeno[2,1-a]indene, 50 mg of which was polymerized with 32 mg 1,4-bis(2-ethylhexyloxy)-2,5-diethynylbenzene in the presence of 9.7 mg tetrakis(triphenylphosphine)palladium and 3.3 mg cuprous iodide at 60° for 48 h to give a copolymer (yield 82%) with Mn 37,500.

IT 625389-91-5P

RL: IMF (Industrial manufacture); PREP (Preparation)
(preparation of π -conjugated organic material of polycyclic fused ring type
for producing π -conjugated organic materials)

RN 625389-91-5 CAPLUS

CN [1]Benzosilolo[3,2-b][1]benzosilolo[2',3':4,5]silolo[2,3-f][1]benzosilolo,
5,7,12,14-tetrahydro-5,5,7,7,12,12,14,14-octamethyl- (CA INDEX NAME)



OS.CITING REF COUNT: 1 THERE ARE 1 CAPLUS RECORDS THAT CITE THIS RECORD
(1 CITINGS)

REFERENCE COUNT: 2 THERE ARE 2 CITED REFERENCES AVAILABLE FOR THIS
RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L3 ANSWER 20 OF 20 CAPLUS COPYRIGHT 2010 ACS on STN

ACCESSION NUMBER: 2003:829796 CAPLUS

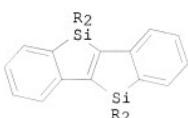
DOCUMENT NUMBER: 139:395996

TITLE: Bis-Silicon-Bridged Stilbene Homologues Synthesized by New Intramolecular Reductive Double Cyclization

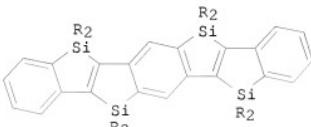
AUTHOR(S): Yamaguchi, Shigehiro; Xu, Caihong; Tamao, Kohei
CORPORATE SOURCE: Department of Chemistry, Graduate School of Science,
Nagoya University, PRESTO, Japan Science and
Technology Corporation (JST), Chikusa, Nagoya,
464-8602, Japan

SOURCE: Journal of the American Chemical Society (2003),

125(45), 13662-13663
 CODEN: JACSAT; ISSN: 0002-7863
 PUBLISHER: American Chemical Society
 DOCUMENT TYPE: Journal
 LANGUAGE: English
 OTHER SOURCE(S): CASREACT 139:395996
 GI



I



II

AB A homologous series of bis-silicon-bridged stilbenes I and II was prepared by new intramol. reductive cyclization of bis(o-silyl)-diphenylacetylene. The reaction of bis(2-dimethylsilylphenyl)acetylene or bis[2-(ethoxydimethylsilyl)phenyl]acetylene with excess lithium naphthalenide gave I, R = Me (2a) as a result of the two-electron reduction at the acetylene moiety and double cyclization in a 5-exo mode of the dianion intermediate; similar reaction of bis(2-diphenylsilylphenyl)acetylene produced I, R = Ph (2b). This methodol. was also applied to the preparation of tetrakis-silicon-bridged bis(styryl)benzenes II (9, R = Me), starting from 1,4-dibromo-2,5-bis(2-bromophenylethynyl)benzene. The silicon-bridged π -conjugated systems thus prepared show intense fluorescence in the visible region. Comparison of a bis-silicon-bridged stilbene with its carbon analog demonstrates the substantial effects of the silicon-bridges on the electronic structures and thus on the fluorescence properties.

IT 625389-92-6P

RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)
 (crystal structure; preparation, structure and photophys. properties of
 bis-silicon-bridged stilbenes)

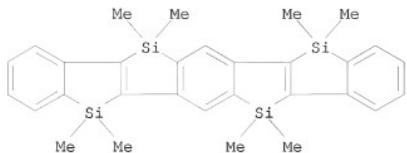
RN 625389-92-6 CAPLUS

CN [1]Benzosilolo[3,2-b][1]benzosilolo[2',3':4,5]silolo[2,3-f][1]benzosilolo,
 5,7,12,14-tetrahydro-5,5,7,7,12,12,14,14-octamethyl-, compd. with benzene
 (1:3) (CA INDEX NAME)

CM 1

CRN 625389-91-5

CMF C30 H34 Si4



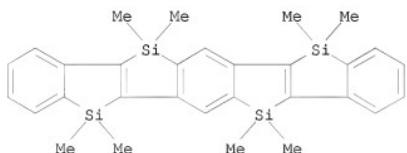
CM 2

CRN 71-43-2
CMF C6 H6

IT 625389-91-5P

RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)
(mol. structure, fluorescence spectra; preparation, structure and photophys.
properties of bis-silicon-bridged stilbenes)

RN 625389-91-5 CAPLUS

CN [1]Benzosilolo[3,2-b][1]benzosilolo[2',3':4,5]silolo[2,3-f][1]benzosilolo,
5,7,12,14-tetrahydro-5,5,7,7,12,12,14,14-octamethyl- (CA INDEX NAME)

OS.CITING REF COUNT: 65 THERE ARE 65 CAPLUS RECORDS THAT CITE THIS

REFERENCE COUNT: 27 THERE ARE 27 CITED REFERENCES AVAILABLE FOR THIS
RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

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Executing the logoff script...

10/578,352

11/24/2010

STN: SEARCH

=> LOG Y

COST IN U.S. DOLLARS	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	117.70	309.95
DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)	SINCE FILE ENTRY	TOTAL SESSION
CA SUBSCRIBER PRICE	-17.00	-17.00

STN INTERNATIONAL LOGOFF AT 08:56:25 ON 24 NOV 2010